From Darkness To Light.

Unlocks the Mystery of Nature

Terrence Duffy

FROM DARKNESS TO LIGHT

OR

DUFFY'S COMPENDIUMS OF NATURE'S LAW, FORCES AND MIND COMBINED IN ONE

CONFORMABLE TO THIS, HIS GREAT DISCOVERY,
THAT THE SUN AND EARTH ARE THE
POLES OF THE MAGNET

EXPLAINS

THE MOTION OF THE EARTH—HOW MAINTAINED
WHAT SPACE IS—WHAT FORCE IS

ANSWERS THE MYSTERIOUS QUESTIONS, "WHAT IS MAGNETISM; WHAT IS ELECTRICITY?"—EXPLAINS ALL THE VARIED PHENOMENA OF PHYSICAL BEING—WHAT IS LIFE; HOW SUSTAINED?—THE MAGNET BEING THE KEY THAT UNLOCKS ALL THESE MYSTERIES

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TERRENCE DUFFY
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This Page

I DEDICATE TO MY ESTEEMED AND RESPECTED FRIEND,

William E. Bushnell,

WHOM I HAVE KNOWN FOR MANY YEARS, AND WHO HAS CONVERSED WITH ME IN RELATION TO MY IDEAS ON THE LAW OF NATURE AND ITS RESULTS, HE BEING THE ONLY PERSON WHO COULD UNDERSTAND AND RESPOND TO MY INVESTIGATIONS AND STUDIES OF NATURE'S LAW, FORCE AND MIND.

In presenting this work to the people in my own crude way, I hope they will overlook any errors or mistakes that I may have made in the language used. I have endeavored to write it as I understand it, and have it as concise as possible, and in plain words without any elaboration, for Nature is plain and simple in all her works, and I am simply an instrument of nature.

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FROM DARKNESS TO LIGHT.

WHAT IS ELECTRICITY?

THIS question has been many times asked. After many years of investigation and thought in the field of Nature under Nature's law, I have arrived at a conclusion of Nature's force and phenomenon. Let us take our minds into space, and observe what can be discovered in space.

There can be no space or vacancy; there is something everywhere. What is that something? The sun holds the earth by attraction. What is that attraction? It is a pull, suction or tension between the two bodies. If the sun and earth are held by this pull or strain, there must be a great tension between the two bodies. What is the tension? Everything in space, or between the earth and sun, must be filled with this pull or tension. All matter on the earth must be in that tension.

Let us procure a common piece of iron to make a magnet. That iron in its natural state has grown up on that tension. It permeates it as it does all matter. The tension is part and parcel of it. We prepare this iron and make it into a magnet. In the process of manufacture it is undergoing changes. The heating and hammering

drives all gases and impurities out of it and makes it hard, compressing its atoms, binding them together. This ruptures the atoms, making them unstable or sensitive, or vibrating under strain or stress. The tempering by heating and cooling shrinks and expands its atoms, inclosing the lines of tension within the magnet. This heating and cooling is in harmony with Nature, and brings the magnet into the embrace of the tension around it, thus forming a union between them. The magnet has worked itself into the tension, and the tension has worked itself into the magnet, and they are united. The common piece of iron is now a steel magnet ready to be magnetized. What is magnetism?

It is the great pull or tension of space. If the sun holds the earth in space, there must be a certain pressure per square inch. We will assume ten thousand tons. This weight or pressure is pressing around the surface of the magnet. This would crush it if all the tension of space were excluded from it, but the lines of tension are through its atoms, making an internal and external pressure, but in equilibrium at rest.

We will now magnetize the magnet. This produces a circulation or circuit through its poles. The current applied to the magnet broke its equilibrium, vibrating its atoms, and the atoms vibrated the tension, and the pressure on the out-

side being constant pressed into the poles, producing a circuit or flow. The circuit once formed cannot rest as long as the magnet is sensitive, or in harmony with the tension; the great pressure around the magnet crushes into it, keeping up the circulation.

We now apply the armature to the poles of the magnet. It falls into them like air into a vacuum. The magnet is partially a magnetic vacuum in space, and the pressure outside presses into this vacuum and produces the circulation. The magnet now finished, we apply it to use to produce Electricity.

When we make and break the magnetic poles, we produce Electricity. We are then acting on the tension or magnetic vacuum in the magnet, it being a reservoir of energy under magnetic tension or in vibrating strain or circuit.

What is Polarity? The earth pulling from the sun forms the poles. The earth being one, and the sun the other pole. The space between them being filled with the pull or tension, making it as solid as if the two bodies were united. When we make and break the poles we are acting directly on the pull in space that the magnet occupies.

Now, space being filled with tension or pull, we place a conductor or copper wire to utilize this Electricity or magnetic pull. The copper being

non-magnetic makes a hole in space, and we send what we call a current through it. The wire forms a circuit through space.

Now this space around the conductor is filled with this magnetic tension, to the pressure of ten thousand tons to the square inch. The wire acts as a tube through this great force, and the quantity we apply is displaced through the other pole or end of the wire. This displacement is the circuit. The quantity applied has to be displaced at the point of application in order to continue the circuit. All space is full of this force that we act on and disturb. We cannot put any more in it, we simply give it motion. The return circuit through the earth is the same as through the wire.

To illustrate the nature and action of the conductor, we procure a piece of rubber hose, bending it in the form of a horse shoe, we fill it with water. We now force any given quantity in at one end and the same quantity will discharge at the other end. The water did not travel through the hose, it was merely a displacement of the quantity applied. The hose was full and could not hold any more. As space is full and can hold no more, the conductor acts like the hose; therefore, Electricity in traveling is simply a displacement of the magnetic pull or tension of space.

Again we illustrate. We take the same hose and fill it with bullets. We now force in at one end, one, two or three bullets. The same number will drop out at the other end. These are equivalent to magnetic vibrations, pulls or electrical waves. The hose is filled with the bullets, and the conductor is filled with the tension; neither can hold any more. Every vibration displaces a vibration of the same quantity at the other pole or end of the conductor. These vibrations produce heat, and this heat expands the cold tension in the conductor and displaces the same quantity in circuit at the other end of the wire. This tension does not travel or move only in circuit, and a vibration disturbs all this circuit at the same instant, and it finds its equilibrium or point of rest at the point of disturbance. This is the circuit disturbed.

Can space be displaced? Air and all other gases may be displaced or compressed, but the tension of space cannot be displaced or compressed. We procure a glass tube and some steel filings. These we put into the tube, filling it. The filings have displaced the air but not the space; whatever is in the tube is in the filings. We place the filings in a crucible, and put them in a furnace and melt or combine these atoms. Whatever condition was in the crucible must be in the atoms of the steel. The heat raised the cold and

the atoms combined, forming a fluid. The heat now removed and the cold forms a solid of the atoms. These changes have not displaced the space in the crucible. Its conditions are the same. The tension of space presses into the crucible and around each atom to the weight of the earth pulling from the sun ; therefore, every inch of space between the sun and earth must sustain an inch through the earth. Now the earth being eight thousand miles in diameter, every inch must sustain over ten thousand tons.

This is the great pressure or tension that forces its way into everything on the earth and cannot be displaced. It is our Electricity, magnetism, heat, light and life. In referring to the displacing or compressing the tension of space, it must be understood that it is meant by this that it cannot be expelled from any body or matter, or cannot be taken out of one place and put into another, or cannot be compressed like air or any other gases, for it is not a gas or anything like it.

For experiment, we procure two powerful magnets and place their poles close together, say an inch apart. There must be a great pull or tension in that space. If we pass something between these poles that is non-magnetic, it will not affect it or resist its passage, yet the pull is there ; but if we put a piece of iron in the space it will be held as though in a vice. The two magnets are the

same as the sun and earth. The pull or tension is between them, and is constant and reliable. What contrivances of man can break these lines of pull or tension, ten thousand tons per square inch? When we can do this we will have tapped the universal force, the reservoir of energy and life, heat and light. But how can these lines be broken or kept open? Can man construct anything to expel this great force and keep it under control? The copper wire comes nearest of anything yet devised by man. The atoms of the copper lay so close together as to almost form a solid, and being non-magnetic and non-vibratory cannot absorb or take up any of the magnetic force or tension applied to it. This gives the tension free action for circulation through the wires. The two magnets are in circuit. One is pressed into the other, filling the circuit. The pressure around them has pressed them together, holding them in this form and in circuit. They have found their equilibrium or point of rest in their own embrace, and united and pressed together by the tension of space.

THE HUMAN BODY A MAGNET.

THE blood is a magnetic fluid. The brain is equivalent to a magnetic or electrical storage battery or coils. The brain floats in the tension of space, each organ being like millions of fine wires coiled in receptacles, for the storage of impressions, or experience, or intelligence. The more of these coils that are in the brain the more surface they offer to the lines of tension for impressions, or the storing of knowledge.

The blood is a magnetic fluid, floating in the tension of the body. The blood offers a resistance to the free circulation of the tension of the body, and is put in motion. This is the same as the circulation through the magnet. Only the magnet circulates heat and cold; but the body must have a fluid as a circulating medium to generate heat, to keep up action and life. Every molecule of blood is floating in the tension, vibrating it, producing heat. The veins of the body are filled with this magnetic fluid, as it circulates through the body. It is constantly disturbing the lines of force, generating heat, and vibrating the nerves, and they resist these vibrations, and become heated, and expand, and act on the tension, vibrating it. It is a continuous

interchange of action through the body, to keep up life. The body must generate heat, to keep out the cold. It is a battle between the two opposing actions. All atoms and bodies are individual magnets; for the tension is in them and circulates through them, keeping up their life and motion, giving them all their individuality and family relations.

The circulation of the body is its life. Stop it, and death ensues. The body is like a sponge; it is all a mass of spongy matter, containing millions of pores. A needle applied to the surface of the body could not find a place without a pore, and so it is all through the body; and it contains the fluids which are water and blood. The water is distributed all through the body, like a sponge. The blood is in the veins and arteries, incased in little tubes, like small rubber tubing. This tubing conducts the circulation of the blood, which is the circulation of heat and the circulation of the tension, and heat and cold.

The circulation of the body is produced by the tension and nerves resisting each other. They generate heat, and cause the blood to circulate. This is like the magnet. It is the circuit or circulation between the sun and earth, and is produced in the body; for it offers a resistance to its circuit, or lines of pull or tension.

This circulation between the sun and earth

ignores all obstructions of matter, it being in all matter, holding it at rest, and when vibrated on, it circulates through all matter. Nothing can confine it or compress it, when heat or vibrations are applied to it. This is the great circulating and equalizing medium.

If the blood is in a healthy condition, having no congealed matter in it, then it can circulate freely; but if there is any impurities, such as coagulated or sour, fermenting matter in the blood, this, in passing through the veins, would clog them and prevent a free circulation, causing heat and fever at this point. The smallest particle of disease in the body offers a resistance to the free circulation, causing pain. All diseased or sour, fermenting impurities in this circulation offer a resistance to it, and cause heat to be generated at this point. This is what causes all pain and disease. The circulation in the body should be perfectly free, in order to be healthy and in a happy state of mind; that is, the tension in the body should have free action and circulation. Then it would be in harmony with the law of Nature; that is, the sun and earth breathes through this body, causing its circulation and maintaining its life. The circulation of the blood through the body is continually disturbing the lines of tension from the outside, causing the pressure around the body to press into it, keeping

up the circulation of the blood, and heat and cold.

All circulations in all bodies in harmony with Nature are sweet and pure in life; for Nature's law is purity in all her actions. She is always ready to sweeten and purify all impurities. This she is continually doing by maintaining her pull or circulation. This action produces motion in everything on the earth, preventing sourness or stagnation. Each molecule of blood incloses the tension within it, and when disturbed by the circulation these molecules vibrate it, generating heat, and the heat keeps up the circulation by displacing the cold. The water or moisture of the body is all in circulation or motion, from the vibration of the tension by the heat generated by the resistance of the matter of the body. This body is a mere shadow in the tension. It is floating through it, like a fish floating in the water; but the tension offers no resistance to motion, like the water. It is the matter that offers a resistance to the free circulation of the tension, causing heat.

Now, this body comes from the seeds, and these seeds combined and a body grew from them. These seeds gradually expanded, occupying more space, maturing and developing into a body. This was Nature's way of building up a body.

Everything must grow up in the tension.

Nothing can get into this tension only by growing up in it. This growth does not add anything to the earth's mass; it is only a condensed matter of the gases that are now on the earth. These gases cannot be added to or diminished. They are indestructible, and circulate through the earth and air, and all bodies grow from these gases by condensation. This is the earth's circulation. Now, these gases feed all animal and vegetable life. They grow and decay, forming a gas. This gas mixes with the air and all other gases, and are condensed into rain, and fall on the earth, to build up more bodies. This is Nature's simple circulation. This body, in the process of growth and maturity, filled no space in this tension. It was only a condensation of gases.

All these gases are divided into atoms. So the body is built up of atoms. Now, these atoms are indestructible and everlasting, and this body grew up in the tension imprisoned in it, and it cannot get out of it as long as it has form or action; but as soon as the body ceases action the change begins. The body now offers a resistance to the circulation of the tension, and heat is generated in its mass; for the body is now one mass of inert matter. All this matter is the atoms. These atoms cannot liberate themselves in this cold condition; but the matter begins to ferment. This is heat, and this heat liberates all the atoms,

forming a gas. Now, the body, or atoms, has got out of the tension through the gas, but the form remains where the body was; they are now separated from the tension.

Now, the body grew up from atoms, or gas. These atoms consolidated, and formed the body. All these atoms have life and circulation, and are condensed into the body, and the body can separate these atoms, or get out of the tension, only by going back into the condition it came from into atoms. The tension in the body can be made larger or smaller only by heat or cold; but as the gases are liberated by the heat generated by the fermentation, they mix with the air, and are carried up into the cold-air space, and condensed into the rain to fertilize the soil of the earth.

The gases that have evaporated from this body have not disturbed or destroyed the tension that the body occupied. These gases left this tension intact. It can be moved only by the body that it occupies, and that has the use of it, as long as it can act on or utilize it. Now, all these atoms that formed this body were in the tension, part and parcel of it, but having a form, these atoms were of different families—that is, different gases—and these gases combined to build a body. These atoms were not made. They have always existed, and they can condense into other bodies,

but not in a mass. They are separated by the air, and circulate through it, and are deposited on the earth, and produce vegetation, and the animals feed on this vegetation, maintaining life and motion. Now, this vegetation is the atoms or gases condensed into them, and the animals feeding on this vegetation or gases condense them into the animal, and the body grows up and matures on them. Now, the body is composed of atoms and the tension. The atoms are heat, and the tension is the one and only force filling all space and matter; so the matter of the body is heat, and the tension is the cold. These two giants are continually fighting for place, and this fighting is what gives life to all bodies. This is a mutual fight to produce life. It is not as man may fight. It is Nature's fight to maintain life. We find the body is heat. This heat has to resist or fight the cold tension of space. This action continued maintains life in all matter, for all matter has heat and life in it.

WHAT TAKES PLACE IN THE BODY AFTER DEATH.

THIS body is what we call matter. This matter is condensed gases, or atoms. These atoms, or gases, can separate and dissolve out of this body or the space they occupied. The tension is in this body at rest. This is the space the body occupied. This body gradually dissolves into gases, going back into what it came from. This dissolution does not disturb the tension of this body; for it grew up in it, and can get out of it only by evaporation or separation of the gases or atoms.

Now, the matter of this body does not rot or decay, going into nothing. This decay is a purification by fermentation, liberating all the gases, giving them freedom to go off and condense into some other body or matter. All these gases mix with the air, and become purified, and condense into rain, and fall on the earth, to build up more matter and bodies. These gases cannot be destroyed or burned up. They are indestructible, like all other matter or gases. Now, these gases consolidated, and a body grew up from them. This body had life and motion; for these gases

formed a body, and this body was the tension, part and parcel of it, giving it life and motion; but the gases condensed into this body, giving it form. This form held the tension within it, and the form resisted the circulation of this tension, and life is produced in it. Now, we cannot understand how this body was made; for we find that all the matter or material that this body is composed of has existed, and there is nothing made or nothing destroyed. This is Nature's simple circulation. All the resources for building up bodies or matter are here existing, and everything must grow up from this by condensation. This condensation is a slow work of Nature, and is accomplished by depositing atom by atom, to build up the body or matter in process of growth. Nature is never in a hurry. She can afford to take her time, for she does her work well, and never makes a mistake. Can man say as much? Now, we find that a body can be made or formed only by condensation of the gases of the earth, and these gases are indestructible and everlasting as the tension that fills all space and matter. We find that nothing can be made, generated, or produced; for everything is finished and cannot be destroyed. We simply act on, or utilize the conditions that are now on the earth. These conditions we did not make, generate, or produce. Nature left none of her work unfin-

ished, and she did this work well, with wisdom, intelligence, and reason. Man is the only being that can criticise this work of Nature.

AN ILLUSTRATION OF THE TENSION OF SPACE.

LET us make or build up a small artificial world, and comprehend what is the tension of space.

We procure a glass globe, with an opening. This globe may be about three feet in diameter, and the opening about six inches. We collect dust, sand, and rocks, and all other matter that may be in the earth, and we pulverize all this mass, and put it into the globe. Now, this globe is filled with the tension of space. The sun and earth are pulling their lines through it, to the pressure of ten thousand tons to the square inch. It contains tension and air. As we fill it with the dust, the air is being expelled; but we cannot expel the space or the conditions in it. Every atom of dust is encased in the tension. We pound the dust gently, to compress it, and force all the air out of it, and we now pour some water on it, to unite and hold it together. The globe is now filled with the same ingredients as the earth contains. We allow this globe to remain under the sun's rays until it becomes dry and hard. This matter in this globe has not dis-

placed its space; whatever strain, tension, or condition was in it is in its mass. The heat imparted to it evaporated the water, and the air took its place. We will now break this globe, and let its contents stand alone. We have a little world, with all the conditions of our own world. The air and tension is in, around and through this little world, in equilibrium and at rest. The sun's lines pass all through it to the same pressure as there is throughout space; but it offers a resistance to the lines of tension, and heat is produced in its mass. Its tension is vibrated, and a circulation produced. The air is heated and expanded, and vibrates the tension. The tension vibrates the air, and the matter resists, and heat is generated. The cold tension outside is constantly pressing around it, trying to become equalized. They resist each other, and heat is the result of the battle. As the heated air circulates around this little world, it is continually disturbing the lines of tension and protecting it from the cold, preventing its lines from concentrating around it and crushing out its heat. But the heated air constantly circulates around it, forming a cushion or insulation; for the heat generated in the little world is being absorbed by the cold space, and the cold is drawn in to fill its place. This is its circulation and life; for so long as it can generate heat, it can maintain life.

This little world has been built up from atoms on the tension within it. These atoms did not fill any space; they simply occupy a portion of space, the same as gas. They cannot displace space. It is too fine for anything to separate or divide it. Everything grows up in it, and whatever affects it affects everything. It holds the tension and air at rest, and when the sun shines on it this tension and air are vibrated, and its matter or mass resists these vibrations and becomes heated, and this heat circulates through it and life is continued.

As long as the sun shines on this little world, it can maintain its circulation, which is its life. The sun's lines are the lines of tension. Let us suspend this little world—say about four feet from the ground—and apply heat to its surface. As the heat increases around it, its matter will vaporize and go off in heat. That is, we apply sufficient heat to it to dissolve or vaporize it. This heat will displace sufficient cold to allow its atoms to dissolve, and the cold space will pull up this heat; and as the heat rises the cold will take its place, and thus form a circulation of heat and cold. This is the action that dissolves and vaporizes its atoms. It is the interchange of heat and cold that vibrates the tension within its mass, and when these vibrations are rapid enough, the atoms separate from these vibrations. The pres-

sure that holds them together is being vibrated and thrown out of equilibrium. The heat and and cold are seeking a point of rest. One is resisting the other, trying to occupy each other's place. The cold is constant, and presses all around the heat, and the heat is trying to make a hole in the cold space; but this it cannot do, for it would take, perhaps, a million degrees of heat to make a vacuum in cold space. If we were in this cold space, midway between the sun and earth (it is, say, a million degrees below zero), in order to be on an equal with it, we would have to be able to generate a million degrees of heat to live there. Now, this little world has disappeared in heat and vapor, and gone up to the clouds, and condensed into the cold-air space. After all the heat has been extracted by the cold space, all this vapor mixes with the moisture in the clouds, and condenses into water, and the cold presses it back to the earth again; it being no more heat, the heat has vaporized it and the cold has condensed it.

One has done as much work as the other. There has been nothing lost. It has all come back to the earth, the point of rest, and we could gather or concentrate all the atoms of that little world and build it up again. And as we would build it after the first form and prepare it in the same way, and apply cold instead of heat to dis-

solve or vaporize it, this would have to be done by throwing or launching it out into the cold space beyond the air. This cold would concentrate its lines around and through its atoms, and vaporize them, as the heat has done. This little world would disappear in space, and perhaps condense back again to the earth or some other world or planet.

But if this little world could generate a million degrees of heat within itself, it could resist the cold and maintain itself. A million degrees of heat and a million degrees of cold, pressing against each other, would exert great force. This is the great cold pressure that presses against all heat and against and around the earth; for the earth is a ball of heat, rolling around in this great cold space, and they are seeking an equilibrium or point of rest.

The heat vaporizes our little world by raising the cold pressure around it, and allowing its atoms to dissolve or separate. The circulation produced by the heat vibrated the tension so rapidly that its atoms could not hold together. The atoms resisted these vibrations, producing heat; and the heat displaced the cold, and the cold displaced the heat. They were constantly changing places, seeking an equilibrium or point of rest. The matter of the little world being the resisting medium, the cold molecules of air are

drawn into the intense heat, and they explode, breaking the lines of tension, generating heat and light. This action keeps out the cold sufficiently to allow all its atoms to dissolve, and the cold crushes our little world, for it could not generate heat to resist it. It was a product of the earth, and was encroaching on the cold space, and as it advanced into this cold space, the pressure increased around it by degrees, until it could resist no more, and it was crushed like a soap-bubble, and disappeared in space. It became a part of space, or an invisible gas.

The heat can vaporize matter, and the cold can vaporize matter, or change what we call a solid into a gas. One is equal to the other. A degree of heat raises a degree of cold. The cold is inert and dead. The heat raises the cold, and gives it motion or circulation. The heat gives the cold life by forcing it to move. The heat radiates from the earth; that is, we always observe the heat generated by the sun's pull ascends from the earth, not descends from the sun.

If we fill a barrel with water, and apply sufficient cold to it, it will freeze or become a solid. This cold has solidified this water, and it holds it in this form at rest. We break this barrel, and allow the ice to stand alone in its present form; as long as we maintain this cold it will remain a solid.

Let us apply heat to it, and watch the result. We form a circle of small pieces of wood around it, and ignite this wood. The flame and heat displace the cold by breaking its lines and forming a circulation. This circulation vibrates the lines of tension around the ice, separating its molecules and dissolving it. The heat has lifted the cold from around the ice, and allowed it to dissolve into water or fluid. As we increase the heat, this water will become vapor, or steam, and will ascend into the clouds, condense into rain, and come back again to the earth, it being the point of rest.

This is its circulation of heat and cold. The heat raised the pressure of cold from the ice, and it dissolved and became vapor. This vapor was heat, and this heat was pulled up to the cold-air space, and there condensed into water, after all the heat was extracted from it, by the cold tension of space. As the heat ascends, the cold descends, to fill its place, and so the circulation is continued of heat and cold. Thus, we find the cold pressure held the ice in its solid form, and the heat raised the cold from around the ice and allowed it to become a fluid, and as the heat is increased, the water becomes a vapor, or steam, and is pulled up by the cold space.

ACTION OF HEAT AND COLD ON THE HUMAN BODY.

LET us observe the action of heat and cold on a human body in a healthy condition. We inclose ourselves in a room, and the temperature is—say, sixty degrees above zero—and we feel good. Our blood circulates freely, its heat being ninety-six degrees. This is thirty-six degrees above the air of the room. This allows free interchange through the body of heat and cold. As fast as the heat is generated in the body, the air around it absorbs and carries it off, and allows the cold to enter and fill its place. There is a pressure of heat in the body, and a pressure of cold around the body. They are seeking an equilibrium, or a point of rest, through the body. They are fighting for each other's places, and this fight generates the heat and keeps up the battle. This is activity, and a free circulation. Let us increase the heat in the room to about ninety degrees. This makes the heat in the body and the heat in the room nearly equal. The body will become feverish. Its temperature will rise; for the air cannot carry off the heat as fast as generated. The breathing is difficult and oppres-

sive, and as we increase the heat, the blood's heat increases, and at one hundred degrees in the room the pressure is about equal, and there is no interchange of circulation of heat and cold. The heat has found its equilibrium and point of rest in and around the body. There is no more interchange of actions.

The air cannot carry off any of the heat generated in the body, and this heat remains in the body, and causes suffocation or death.

Now, let us reduce the heat around the body, and watch the result. Degree by degree, we reduce the heat, and the circulation begins to move slowly until we reach the normal, and the body is in a healthy state ; as we may reduce the heat until we reach zero. The blood must circulate rapidly, to produce heat, as fast as it is absorbed from it by the cold around it. There is a pressure of heat in the body, and a pressure of cold around the body. They are trying to occupy each other's place. The cold presses around the body, and the heat presses from the body. The body is a vacuum of cold, and the space around the body is a vacuum of heat. They want to become equalized ; but the body must exercise and move around, to keep up its circulation and heat, for the cold is constantly pulling the heat out of it, and it must be able to generate this heat as fast as it is extricated. The cold is reducing the

heat, and the body is using all its force to keep out the cold. This is a struggle for life—between heat and cold. The body is exhausting its energy, and gradually reducing its nervous and muscular force by this battle with the cold.

As we increase the cold, it presses around the body, trying to crush it; but the body still struggles to keep it out. The body has to do all the fighting; for the cold is constant, and lets the heat do all the struggling. The cold gains on the heat, and the body is rigid and at rest. The cold has found its equilibrium, or point of rest, through the body.

We find heat and cold to be the great giants of force. One resists the other until they become equalized. The heat gives the cold motion by expanding it, filling more space; and the cold shrinks the heat, compressing it into a smaller space. This action is continually taking place in the atmosphere, giving it motion and circulation, vibrating the lines of tension, generating heat. The cold is inert, a dead pressure or weight, filling all space between the earth and sun. The heat has to raise this weight, to give it motion, which is circulation. All action between heat and cold is by circulation or interchange of place. As the heat moves, the cold fills its place, forming a circulation and motion, which is life. The heat presses the cold up from the earth, thus

protecting the surface of the earth from the cold. This heat has to lift the cold. One presses against the other, and the heat reacts against the earth, generating heat and light. This is all vibrating action on the air and tension. The reaction of the heat is a reflection. The molecules of the air are like glass beads; they reflect their light into each other, and the tension conducts this light on to the earth. The earth resists, and reflects it back into the air, generating heat and light.

This is what we call radiation. This radiation of heat and light vibrates the lines of tension, keeping up this action and circulation. This prevents the cold tension from concentrating its lines close to the earth. It forces the cold upward, thus protecting the earth, imparting life to it.

The sun and earth are in constant communication or circulation with each other. This space between these bodies is filled with this tension to the weight of the earth pulling from the sun. Nothing can separate this pull; everything is grown up in it, and is part and parcel of it, and must obey its motion or action. All matter is a mere shadow in this tension, and when disturbed sufficiently, it can vaporize or dissolve all matter into invisible gas, either through heat or cold pressure. One is equal to the other. Any mat-

ter or body in these lines of tension offers a resistance to their action or circulation, and heat is generated in them, and a circulation is produced. This circulation produces life in all animal and vegetable matter; for it is the circulation of the life of the sun and earth. They are breathing the breath of life into everything between them. They are imparting part of their life-force to all this matter on the earth.

This circulation is like our life blood; for it is the sun's and earth's circulation that is in our veins, and as they breathe or circulate we do the same. We are a product of them, and must obey their laws of motion, which is their circulation. The circulation is all through the earth, generating heat in it, for the earth, or the matter of the earth, offers a resistance to this circulation, and heat is generated by the tension being vibrated, and it vibrates against the matter of the earth, and causes the heat, and the heat displaces the cold, and so the circulation is continued.

A LOOK INTO THE RESISTANCE OF HEAT AND COLD.

THE cold is inertia; that is, it is dead, motionless. We procure an anvil; this will represent the cold. It is the resisting medium, or point of rest. We place a piece of glass on the anvil, and strike it with a sledge hammer. This will pulverize the glass. The force applied through the hammer represents the heat, and the glass represents the force exerted. The glass received the shock or pressure of the hammer, the anvil resisted, heat is generated, and the glass is pulverized or vaporized from the impact pressure. This is similar to the impact of the heated air against the cold tension of space. The molecules of heated air are like the hammer striking against the the cold. The cold resists the heat, and the air is vaporized; for all the molecules of air explode from this pressure, generating heat and light, when the bombardment is rapid enough. Now, imagine the hammer striking this anvil a million times in one second. Assuming that it fell two feet every stroke, what would become of the anvil or hammer? They would be vaporized, like air or glass. But think of the billions of molecules

of heated air that hammer against the cold tension in a common tallow-candle flame! Every second the explosions of the molecules of air are so rapid that the cold is like the anvil; it will not move, and the air bombards against it, generating heat and light. If the cold tension would move out as fast as the air became heated, there would be no resistance, and there could be no heat or light generated.

The earth pulling from the sun generates heat in the air and earth, and produces life and motion, in all animal and vegetable matter. This life is the life of the sun and earth, their circuit or circulation. This is imparted to everything on the earth. The heat evaporates the water, and it is carried up into the clouds and condensed back to the earth, the point of rest. This is a circulation. The water falling on the earth causes the growth of all vegetable life. The animal life feeds on this vegetable life, generating heat in their circulation, which is their life. This is a circulation. The vegetable matter is absorbed by the animal, and the animal is absorbed by the human animals, and it all goes back to the earth, the point of rest. This is a circulation.

The earth produces all animal and vegetable life, and this all goes back to the earth, the point of rest. This is all a simple circulation, or ac-

tion, between the sun and earth, and everything must obey this law, for it is their life. All the matter and bodies on the earth and in all the universe are in circulation, obeying this one universal law of force and life. This is one grand universal circulation.

WHAT IS MIND OR THOUGHT?

ALL space being filled with tension or cold pressure, everything grows up on this pressure, it being equal everywhere, and anything that can vibrate on it can communicate through it to some other object or matter of its kind; providing, they are in harmony with each other, and the time occupied in this communication would be the resistance in the matter acted on. The space between this matter occupies no time in transmission; for every vibration produced displaces a vibration of the same quantity at the end of the circuit.

Now, the brain is vibrating on this force, for all the organs are floating in it, and when they vibrate they disturb the space they occupy. This space is thrown out of equilibrium by these vibrations, and the brain tries to equalize this disturbance by putting some other organ in vibration. These organs are working in thought. They are trying to remember some incident or place. They are communicating with all the organs in their circuit; and when they have discovered or found the object they were in search of, they then find their equilibrium. Each or-

gan of the brain has millions of little nerves, and these nerves are vibrating this tension or force more than ten thousand tons to the square inch. When we think, we disturb this force in the brain, and the space where the thought is located is disturbed to the same extent; for the brain is a circuit, and can communicate to any distance, for there is no distance to this brain's circuit. The brain being a center, acts through this force.

Now the brain being a central station, can communicate through this force to any part of its nerves that are in vibration. These vibrations disturb the same quantity at the point of thought; for every nerve of the brain has its quantity or range of vibrations, and they disturb this quantity at the point of resistance. This is at the point of thought. All the nerves of the brain are in circuit through this force. The brain can see through the nerves vibrating on this tension; for there is no darkness to an active brain. The nerves of the brain can make their own light, through this force; and when we think, we disturb a certain organ, and this organ communicates with another organ in its line of work or action, by vibrating the tension. This gives a sound, and alarms all the organs that are in harmony with it, and they are put in vibration and communicate with each other through these

sound vibrations. All these sound vibrations are harmonious, and do not interfere with each other. They travel on their own lines. These are the lines of tension. Now, the brain, thinking, is acting on the great force within it, and there is no end or limit to this great force; it is universal everywhere.

When the brain disturbs this force, it disturbs the equilibrium of the sun and earth; for it is in the space between them, and their lines pass through it. These lines in the brain are heated —say, ninety-six degrees above zero—and the temperature outside the brain is sixty degrees, Now, the heat in the brain presses out against the cold, and the cold presses in against the heat. They want to become equalized. This keeps up a circulation of heat and cold. This disturbs the lines of tensions, giving the brain free action and circulation.

The brain is a ganglion mass of nerves, floating in this force. These nerves are all in vibration, from the heat in the brain. These nerves are like the glow-worm. They are capable of generating light between themselves, by vibrating on the tension. This would be when the brain is in great thought, trying to remember some incident or place, or studying out some problem of mentality. All the nerves would be concentrated this time, and they would vibrate

the tension rapidly enough to make the brain luminous without heat. When we want to study out some great problem, we close our eyes, and look or see through our brain. We are in thought. All our nervous system is concentrated in our brain at this time. They are all assisting each other, trying to find an equilibrium by discovering the missing link, and, when discovered the brain finds its equilibrium.

Now, the brain has been out of equilibrium by thinking, and this brain occupies a portion of space between the sun and earth, and this space has been disturbed by this brain, and the sun and earth are pulling their lines through this brain, and the brain is vibrating its nerves on this force, disturbing them. These vibrations in this brain are disturbing the space between the sun and earth and all space; for this brain could not think if it had no conductor. The tension is solid everywhere, and the brain has this tension as a conductor for all thought or action. The nerves of the brain are a mere shadow in this tension or force. It reflects all matter, and all matter is incased in it and reflected through it, and, when it is vibrated rapidly enough by the nerves, it becomes luminous. The eyes are luminous, and reflect their light into the brain. Now, the light that illumines the eyes is acting on the brain. The same action is inside and out-

side the brain; but the nerves resist more than the air, and heat is generated in the brain, and a circulation is produced. This circulation is continually disturbing the lines of tension, keeping up the circulation and life of the brain.

Now, if two brains were of the same nervous structure, acting on the same lines of tension, having the same ranges of vibration, and were growing up in the same location, under the same influence, and if they were separated from each other after they had matured, they could communicate through their brains to each other; for a thought or action of the brain of either would affect the same organs in the other. They would form a perfect circuit, and could communicate with each other; providing that the temperature that these brains were in would be the same, for the heat must be equal around these two brains to form a perfect circuit or equilibrium. The air insulates and retards the action of these brains; for it is constantly crossing the lines of tension, disturbing them.

If we had two instruments that had the same ranges of vibration, constructed exactly alike, and would sound the same note, and if they were made from the same piece of metal, in the same temperature, and separated for several miles, and, if we would sound one by vibrating it, it would sound the other; for they would be in

perfect harmony, and when we disturb one, it finds its equilibrium in the other, and the time occupied in this communication is the resistance in the matter acted on. This is the metal and air; they are resisting mediums. If these instruments were in communication with the sun and earth, the time would be the same; for it takes no time to communicate to any point or place. If we had a rod of steel connected from the sun to the earth, and if we moved it one foot from the earth, it would enter the sun one foot; and if we could move this rod up and down a thousand times a minute, we would be communicating with the sun and earth, and the time occupied in this communication would be the resistance in the rod, or the time that it would take to move the rod up and down once. This time would be the one thousandth part of a minute.

Now, let us point this rod in any direction that we want to communicate with, and move it one inch in that direction, and we have connected with the object we want. This rod is like the tension of space. This solid is everywhere, and is in communication with all space and matter. and this is what the brain communicates through.

When the brain thinks, its nerves moves this rod, and it is in communication with the object it thinks of. This is mind, or thought. Now the brain has millions of these rods, stretching out

in all directions; for every nerve of the brain is equivalent to one of these rods. When the brain sounds, or taps, one of these rods, it has found the circuit, and it can communicate through any of these circuits. Now, these rods are like mind, or the tension and the nerves of the brain are matter acting on these rods, or tension. This is matter acting on mind. Think of the vastness of this mind. This means all the universe, illimitable space, with all the planetery systems throughout all that vast space; and mind has all that to act on and disturb!

We find that all matter can be dissolved or vaporized by either heat or cold pressure, when this pressure is great enough. Now, this matter will disappear in an invisible gas, and go up to the clouds in heat, and condense and come back to the earth again. It cannot get away from the earth, for it is part and parcel of it, and must come back to it, the earth being the point of rest. Now, this matter is a condensation by the cold tension of space. It is condensed on this tension or cold pressure. All the atoms, or molecules, of this matter, are floating in this force, and as the cold increases around this condensed matter, it presses it into a smaller space, compressing its atoms together, forming what we call a solid. The atoms fill no space in this solid; they are only a condensed gas pressed into the tension. This ten-

sion divides every atom, no matter how small it may be. Now, the tension is the solid that holds the atoms in the solid form. It binds them together, holding them in this form at rest. The pressure is more than ten thousand tons to the square inch. This pressure is pressing on its own lines, not on the solid metal. Nothing can exclude this tension. It is everything, and everything grows up on it.

This solid has been condensed on the tension, and as we apply heat to it we vibrate the tension that holds it in this solid form. This throws this space out of equilibrium, and allows all the atoms to separate and go back to their original condition of gas. This gas has gone out of this space, but the space is left.

WHEN THE EARTH FALLS FROM THE SUN.

THE sun's atmosphere expands and stretches, generating heat and light in it. This expansion may be hundreds of miles. This would be a great wave of heated air, like an immense sea of flame. The earth would pull this flame outward, allowing the earth to move away from the sun. This movement generates heat in the earth's atmosphere, through the lines of tension. As the earth moves away from the sun, the heat generated by this movement is absorbed by the cold space, and the earth is pulled back by this shrinkage, or pull; and some other body pulls on the sun in the opposite direction, and as it approaches the sun, this allows the earth to move away from the sun again. This would form a balance, or equilibrium; as one body is moving away the other is approaching. This would keep the sun's atmosphere in great commotion; for it would be pulled in all directions by the bodies pulling on it, and the waves of light and heat would be surging in all directions, seeking an equilibrium or a point of rest. But there could be no rest there, for it is all life and motion. Think of all

the thousands of bodies pulling and surging on the sun and its vast atmosphere, trying to pull it all to pieces, but it resists this pull, and heat is generated in its atmosphere. Its tension is vibrated by the moving air, and the cold tension of space is pressing all around this sun, trying to crush out its heat; but the bodies pulling on it keep up its heat and light, by vibrating its tension. There is nothing consumed in all this great work of Nature. These bodies are in perfect harmony. There is no quarreling or fighting amongst them. They all do their own work, and assist each other, and harmony prevails. It is not reasonable to assume that the sun is a burning mass; for we do not see any indications of it on our earth. We receive heat and light without any consumption of matter. These come through our atmosphere and produce the air motion, or circulation. Our clouds at some times takes the colors of flames from the position the earth offers to the sun. These clouds, if viewed from the sun, would look like immense flames, as they would move from the pressure of air. This would give the inhabitants of the sun the impression that our earth was a burning mass; for the earth would be constantly offering a different view of its clouds to the sun. These clouds offer a resistance to the lines of tension, and the heat and light are generated in them, and this heat

and light are reflected upward. This makes the outer portions of the clouds look brilliant, giving them the various colors; and these clouds moving rapidly, owing to a great storm, would appear from the sun like the earth was a sea of flame; for the matter of the earth would not be seen, owing to the brilliant light reflected upwards.

Now, we look at the sun, and say it is a burning mass, giving out all its heat into space. The inhabitants of the sun would say the same thing of our earth; but they could not prove it. Nature consumes nothing in all her work. It is only a circulation, or interchange of place. Nature destroys or wastes nothing in all her actions; it is reciprocal and harmonious.

THE MIND'S JOURNEY INTO THE CENTER OF THE EARTH.

AT the surface we find the temperature about sixty degrees above zero, and as we descend it is continually getting warmer. Every few feet makes a little difference. The formation of the strata of rock and earth are varying and changing. Some are hard and tough, and others are soft and brittle. Some are of sand formation, others are like flint, and others are an admixture of all these combined. The ledges of these rocks are generally slanting, indicating eruptions at some period of the earth's life. Again we meet gravel and sand formations, indicating rivers or streams of water. This water is as clear as crystal, it having been filtered through many thousand feet of earth.

We observe all kinds of metal in a solid form. These metals are all beautiful and clean. They are in the ledges and in strata, in all imaginable forms and sizes, from an atom to the size of a barrel. They are continually varying in heat. We have descended 4,000 feet, and it is about the boiling point of water; for we see the steam arising from some water near us, and we feel that

we are nearing the warm place where many people ought to go. This heat does not affect the metal. We find there is a great pressure on us, but we are prepared to resist pressure and heat. It is getting warmer as we descend. We have passed the water belt. The heat is dry and penetrating. As we look around us, the scene is wonderfully beautiful. The crystals in the rocks scintillate like stars. They seem to be under great pressure or strain. They reflect all the colors of the rainbow. They are all in vibration, projecting their sparks of light. The lights and shadows are beautiful, and in perfect harmony—no discord. The sound is bewildering. It is as varying as the colors are. Our bodies are in harmony with it, and we feel happy. As we descend it is getting warmer, the colors are changing, and the pressure getting greater. The light is increasing, and we can see further. The rocks are more transparent and luminous. They seem to radiate the heat and light. The metals are in a larger formation, and more varying and brilliant in colors, and getting softer as they get hotter. As we strike them with a hammer, they give no sound. It is like striking a piece of lead. The heat is getting greater, and the scene is continually changing. As we move down, the rocks are crumbling and brittle, almost ready to melt, and the heat presses up against us, trying to

drive us out of its domain; but we are determined to reach the center, and find out what it consists of. As we reach the molten rock and lava, our bodies float on it, and we have to exert our force to penetrate this to go further down. As we float and swim through this fluid, the heat and resistance increases. The fluid is getting thinner and warmer. It is perfectly incandescent, and brilliant beyond description. This is a world of light and heat. We look around, and see the scene constantly changing. This fluid seems to be rolling like waves of the ocean, only these are waves of light and heat; but we cannot understand how this heat is generated or maintained.

We are swimming and floating through this fluid, seeking the center, and it is getting thinner and hotter, and more brilliant. We can see for miles around us, and the heat is increasing. We are two thousand miles from the surface of the earth, and the temperature is about ten thousand degrees above zero, and constantly increasing as we near the center. The light is more brilliant. It is beyond description. The heat seems to be forced out from the center of the earth. It is no more a fluid. It seems to be like gas or vapor. It is not a solid. There is no weight to it. We float in it, like a bird in the air. Everything is transparent. We can see for hundreds of miles,

and this scene is dazzling and bewildering beyond human imagination. We are nearing the center, and the pressure is decreasing and the heat is increasing—say, about twenty thousand degrees above zero. We find no resistance in moving through this vapor. It is thinner than the air of the earth, but cannot escape, being held by the crust of the earth, which is about one hundred miles thick.

The sound of the vibrating gas or vapor, as we float through it, is charming and enchanting, putting us in mind of Aladdin's Cave in the fairy tales; but there is nothing solid around us. It is like a vast world of molten gold, with sparks of diamonds and rubies projecting in every direction. We wonder what produces these sparks, for we cannot see any connecting link for them to travel on; but they all seem to be going to the center, like ourselves. The colors are changing into a silver hue, as we near the center. The sparks are decreasing, but the light is more brilliant, as there seems to be nothing to obstruct our view. It is like looking at the stars or into space. There seems to be no end to this space. We are very near the object of our journey, and we are glad and delighted. Our thermometer will not move, and we cannot indicate the heat; but it does not appear to be as warm as we reach the center. The heat seems to have been forced

outward, leaving this space a partial vacuum of heat. As we look off in every direction, the scene is grand—our pen could not picture such a scene. This center seems to be a point of rest, for there is no motion. It is as still as death; but there can be no death here; this is a place of life. Everything within this great vault is alive and happy, for the heat gives it life and motion. There is no cold in here to kill any of these beautiful objects. They are all in perfect harmony, and traveling on their own lines. These lines pass out in all directions, radiating out from this central point. They appear to have connected their lines here, and are holding the earth together, continuing it in its present form. If we should use this point as a telegraph station, we could communicate with every inch of the surface of the earth; for if we were to sound or vibrate the tension in this center, it would sound and vibrate the tension throughout all the earth. It would be like sounding a bell. This is a very sensitive point. It is as sensitive as our hearts. It is pulsating, or breathing. The lines of tension are heated, and they expand and vibrate. These vibrations pass out to the surface, and are then absorbed into space.

We wonder how this great cavern or hollow globe can sustain the great weight of the crust of the earth and all the molten mass of metals,

why they all do not fall into the center, it being the point of rest; and why the molten metal is forced outwards; and why the earth does not explode, with all this great heat. But there is nothing explosive here. These gases and vapors are in harmony and do not quarrel or fight, like man. But if the air of the earth should come in here, then there would be a battle and an explosion; and if the water could come in, we would have an earthquake. It occasionally gets into the surface heat from the ocean, there being some very deep valleys in parts of its bottom. When the water forces its way into the crevices of the rocks, there is an explosion, and the water will be thrown into the air, producing what we call a tidal wave and an earthquake.

We are now desirous of returning to the surface, after surveying the interior, and we will take observations as we come out on the other side. We are now on the lines of tension, and will travel on these lines, as nothing can retard or resist us on these lines. We are moving rapidly. We pass through this gas like a meteor. The feeling is like falling from the clouds; but we strike against nothing. Everything is visible. As we leave the gas belt, and approach the denser vapor, we see the sparks scintillating in all their varied colors, as we flash through them into another stratum of heavier vapor, with different

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steam around us as we pass upwards, and the heat is decreasing, and we are beginning to feel cold as we come to the surface and get into the light of the sun, which is not to be compared to the sun in the center of the earth. We have arrived on the surface, after our journey through the earth, and found everything in there heated. Gas, molten metal, and vapor, all in intense heat, and we wonder how this heat is maintained.

We find the lines of tension all through the earth, and in vibration from the resistance of the composition of the earth. This resistance of the matter of the earth to the lines of tension generates the heat the same as a resistance coil. The earth resists the circuit, or circulation of these lines, and it becomes heated. This is a continuous action; for the earth is in constant rotation, disturbing these lines, and generating the heat, and the cold space is continually pulling on this heat. But the crust of the earth protects it from this pull, and saves its life; for if this cold space could pull all the heat out of the earth, death would ensue.

The center of the earth is matter vaporized by the heat within it. This heat is about—say, from ten thousand to fifty thousand degrees above zero. Now the earth is surrounded or floating in a cold space of—say, from zero to a

million degrees below zero. These different heats are seeking an equilibrium or point of rest. The earth must maintain its heat to resist the cold, and the cold is the great weight that presses around the heat, trying to crush it out. But the earth, pulling and rolling in this great pressure of cold, is constantly generating heat by disturbing the lines of the cold tension — vibrating them. The air is the insulator, preventing the heat from being drawn off too rapidly, and preventing the cold from concentrating its lines around and through the earth, thus crushing out all its heat. Then there could be no more action or life; for they would have found their equilibrium and point of rest in the earth, and there would be no more earth. The cold would crush it in its embrace, and it would disappear in space.

Now, if we were to take a piece of metal out of the center of the earth, and put it into the cold space—say, one thousand degrees below zero—this metal would have to raise or displace this great pressure of cold. The heat could not maintain its form against this weight of cold. But if this metal could hold its form and become cold under this pressure, it would be harder than any diamond that was ever discovered. The heated metal would offer a resistance to the cold. It would be occupying its space; therefore it

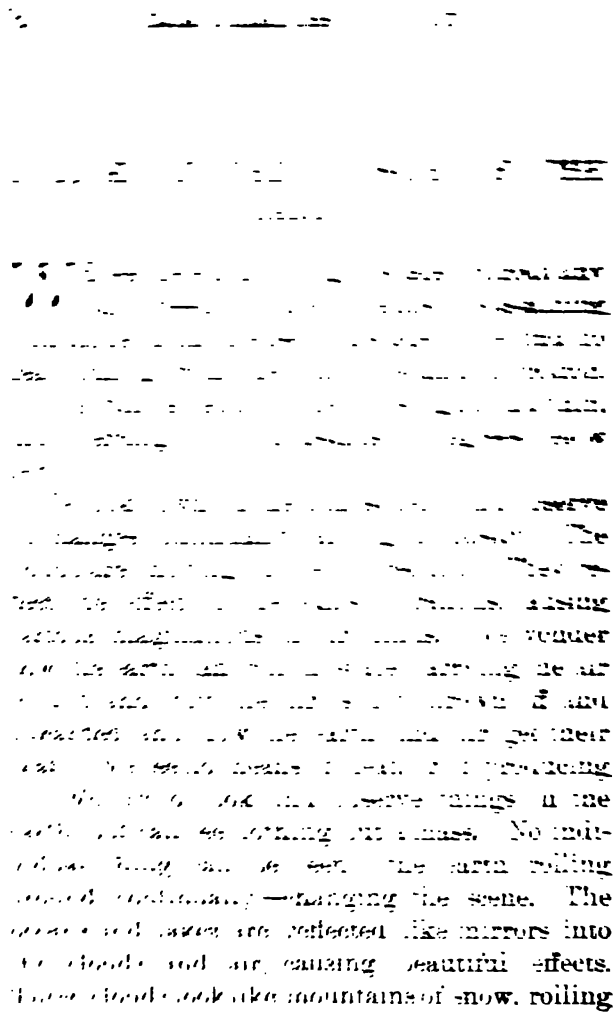
would have to resist or lift the cold pressure, and as it would cool it would be crushed under this weight, and disappear in space. But if we could take a quantity of molten glass, and cool it under a temperature of—say, one thousand degrees below zero, we could have diamonds and all kinds of precious stones, if portions of the glass were colored to imitate these gems. The cold is the pressure that makes everything hard and solid, or hard and brittle, depending on the rapid change from heat to cold. These gems would be cooled under such great pressure that they would inclose within themselves the lines of tension under strain; that is, the tension of space would be imprisoned within them, thus giving them light, for they would be under strain, and the tension would shine or give out light. When we vibrate the cold, we produce heat, for the cold resists these vibrations. Heat, however produced, is by vibrations, and vibrations, however produced, are a product of heat; and these actions have the cold as a resistance to act on. Thus, we find a great pressure of heat inside of the earth, and a great pressure of cold around the earth. One resisting, the other seeking an equilibrium or point of rest. This heat is a pressure, and the cold is a pressure. One resists the other; they try to occupy each other's place, and are resisted. This struggle keeps

up the heat and light, and the struggle goes on.

We find the center of the earth filled with an incandescent mass of metal vapor and gaseous substance in various colors and conditions of fluidity. All the heavy matter appears to be pressed outward. This is from the great heat and rotation of the earth through space. The heated metal presses out against the crust, which is the float or refuse from the metal of the earth. This is a great internal pressure. It would burst the earth asunder, if it did not have something to counter-balance this pressure. But the cold tension of space presses all around the earth, trying to get into its center and crush out the heat that is in there; the heat resists this cold, and they brace themselves against each other, like two giants. Shoulder to shoulder they struggle, and the more they struggle, the more heat is generated; for this action vibrates the tension in the earth, and the matter of the earth resists and heat is produced.

The cold tension is constantly pressing all around the earth, and the inside is heated and in vibration. The outside tension lines are disturbed by these vibrations. It cannot find its equilibrium, or point of rest; for the heat is continually breaking these lines. This causes the cold tension of space to press into the earth with

all its force; but all the air is in vibration, disturbing the lines of tension, thus preventing them from concentrating their lines and crushing out all the heat and life in the earth.



in space, continually changing the panorama. We find the earth rotates in space without any resistance. The air is moving with it. If there were any resistance to the motion of the earth, it would soon come to rest; and if the sun attracted the earth, it would offer a resistance to its motion. We have ascended beyond the atmosphere, and found nothing but cold, open space, and have not been able to find the means of producing heat, light, life or motion.

We have gone beyond the air space of the earth, and found nothing but cold, and are desirous to return to the earth again. As we descend, we find the air is growing more dense; every hundred feet we descend it is changing in temperature and density. The sensation is strange. We begin to see things on earth. The mountains and lakes are becoming visible. We are moving with the air of the earth. It is getting warmer —say about five hundred degrees below zero at twenty-five miles from the earth—and getting warmer as we descend. Every few feet makes a little difference, and the air becomes more dense, but no moisture. It is perfectly dry and cutting, penetrating through our bodies like needles; but we are used to it, and don't mind it. It is continually changing as we near the earth. The scene is beautiful and varying, ever changing. The mountains are coming nearer, and the ocean

looks like an immense mirror, with its grand reflection. The rivers and streams look like silver serpents, brilliantly polished. We are nearing the clouds, with their brilliant colors reflected upwards, like mountains of silver. It is gradually getting warmer and more comfortable. Our blood is beginning to thaw out, and the circulation is about to move, a very peculiar sensation after being frozen so long. We are in the clouds, and the air is becoming moist; the clouds are filled with snow. This is frozen vapor, or condensed water. As we pass through this snow belt we are almost blinded. The wind is blowing with great force, pressing the fine snow into our eyes and ears. This is many thousand feet thick. We are now below the snow belt, and it feels warmer; our blood is in circulation, and we begin to realize that we still live. The feeling is strange. The air is moist, and getting warmer. We observe things on the earth. The city looks like a checkerboard. As we look up and down, the contrast is wonderful beyond description. The air is getting warmer and moister. The heat seems to radiate from the earth in waves, flashing upwards with great force. These waves are more intense as we near the earth. They flash up in our faces like flames. They seem to be pulled up by some great power. The houses are now visible, and the streets can be seen. We can see the people

moving in the streets, and we feel rejoiced and happy to be nearing the land of rest and life, for we have not found any life above the clouds. Our bodies are feeling better, and our minds more active. The circulation is good, and we feel warm and comfortable. It is still getting warmer, and everything visible as we land on the earth and once more stand erect on solid ground. We are delighted and happy that we are alive after our journey through space, and found nothing or got no information, only we found no heat beyond the air space of the earth, and that we found that all the heat came from the earth. But the connecting link we could not find—how the earth generates its heat, or how it gets its motion, light or life.

The space beyond the air is intensely cold, varying from the earth to, say, one thousand miles beyond. Every mile makes a difference of, say, ten degrees. This would make the outer mile ten thousand degrees below zero. This is a very cold space. It would crush anything. Nothing could resist it. If we should put a piece of steel into this cold, it would be crushed into vapor. The steel would offer a resistance to this cold pressure. It would be occupying its space. But if the steel could keep up the heat sufficient to resist the cold, then it would maintain itself; but it would have to fight against

ten thousand degrees of cold, and so it would have to keep up ten thousand degrees of heat, to be on an equal with it. This heat would be as destructive as the cold. The steel could not maintain its form against either. The heat would expand the steel; every one of its atoms would expand or explode, going off into gas or vapor. But how could we produce such a heat? As the cold increases, the heat must be increased to resist it. If we were living in a temperature of one thousand degrees below zero, we would have to have blood or circulation in our bodies of eleven hundred degrees above zero, to be able to resist this great pressure of cold. If we were to try to melt iron, we would have to raise the heat another thousand degrees, which would be a difficult matter. If we would boil water the temperature would have to be raised to about twelve hundred above zero.

The cold is the pressure that the heat must raise or lift. A degree of heat raises a degree of cold. One is equal to the other. Cold is constant, and the heat is a product, or inconstant, and must fight the cold and displace it, and so it is a battle between the two giants; one resists the other, and so the battle goes on.

Now, if we were to make a hollow globe of iron and launch it out into this cold space, and if we were living in it and could generate heat suf-

ficient to radiate outside the globe, then we could maintain it as long as we could supply the heat. The heat in the globe would lift the cold, and break its lines; but the cold would be constantly absorbing the heat, and the heat must be constantly supplied. Our fuel would soon give out. We could not feed this giant cold. It would soon consume all the fuel in the earth, if supplied to the iron globe, and then the cold pressure would concentrate its lines around the globe, as the heat would be reduced. The cold would gradually crush its lines through the iron, and unite these lines through every atom and vaporize them, and the globe would disappear in space. It would become a part of space.

Now, if there were no air around the earth, it would be crushed like the globe, and disappear in space, and might condense, concentrate, and form other planets or worlds. The air around the earth generates the heat, distributes it, and holds it, thus protecting the earth and breaking the lines of cold, preventing them from concentrating their lines. The air is a cushion. Every molecule of air incloses a portion of these lines, and is in motion, crossing and recrossing them, producing heat and protecting the earth; but there is nothing consumed in producing this heat. But if the earth had to supply fuel to maintain this heat, to fight the cold to maintain

its life, how long would it last? It would soon be consumed. If the sun has to consume itself in order to protect its family of planets or worlds, and if it should radiate its heat into space, it would soon become cold. How could the heat of the sun reach the earth after passing through 93,000,000 of miles of intense cold? Could heat pass through a block of ice and produce heat?

The sun's heat must be generated the same as the earth's. They pull from each other, and their atmospheres resist this pull, and heat is produced. These atmospheres cannot be consumed or destroyed, but can generate heat and hold it in sufficient quantities to protect their own bodies and maintain life. How does the heat pass through the block of ice? The ice occupies a portion of space, and the tension is in that space. The molecules of water hold the tension within them, and the ice is held in its form by this tension, or cold pressure. The ice is in the tension, part and parcel of it, offering no resistance to the lines of tension.

The action of the sun's rays on the ice are through this tension. The vibrations produced by the sun on the lines in and through the ice are magnified or focused, or intensified, and pass through the ice; for the ice is in harmony with these lines, being cold and transparent. The ice is like a sheet of glass; the vibrations pass

through it without resistance. These vibrations travel on the lines of tension; that is, their own lines. The earth pulling from the sun, the ice is in that pull, and the effect of that pull passes through the ice, producing the heat. The air resists this pull, and becomes heated and expands, and is put in motion, constantly crossing and recrossing these lines, keeping up the heat and circulation. Every molecule of water is crystallized, and each reflects its light on the other; and when the tension is vibrated, these molecules are excited, concentrating their lines, producing the heat, as if by reflection.

If we try to make heat pass through this ice, it will melt it. This is artificial heat, and cannot pass through on the lines of tension, or through the water of the ice. As the heat comes in contact with the ice, it offers a resistance to it, and is melted or dissolved. The ice absorbs the heat all around it. This heat is displacing the cold, and the cold is absorbing the heat. They are seeking an equilibrium or point of rest. As fast as the ice absorbs the heat, it melts or raises the cold pressure, and allows it to become a fluid.

A LOOK INTO A COMMON PIECE OF COAL.

IT is a product of heat, produced or grown up under Nature's laws. The action of the sun on the coal concentrated its energy or vibrations, storing them in it for future use or liberation. Now, this piece of coal occupies a portion of space, and the tension is in that space, and is cold, and rigid, and at rest. The coal is of a gaseous or carbonaceous nature, capable of being divided into atoms, or molecules. It is cold, and requires heat to separate or liberate its atoms. If we apply heat to this coal, it will raise the cold from around it. This cold is the pressure that holds it in its present form. As the heat increases, the cold decreases, and allows the atoms of the coal to separate or dissolve, or become gaseous. Each atom of the coal holds in itself some of the tension, and when the heat is great enough, they explode, producing the light, or flame. These explosions break the lines of tension, causing the great heat. These atoms are surrounded by the cold tension of space to the pressure of ten thousand tons to the square inch. They explode against this pressure. This is a

continuous explosion of these atoms of gas; for the heat liberates all the atoms or molecules of the coal, forming into gas. The air combines with the gas, and causes the circulation. Each molecule combines with a molecule of air and explodes, breaking the lines of tension. This is all around the coal, lifting the cold and displacing it. The tension inside of the coal being cold and surrounded by the heat, one is acting against the other, crossing each other's lines, generating heat and light.

When the coal is under combustion or combination, it has to raise the pressure of the cold, which is more than ten thousand tons to the square inch. This is the great resistance the heat has to act on and overcome. The heat makes a hole in this space, and the cold crushes against this heat. One resists the other, and heat and light are produced. The molecules of air and gas combine, and expand against this great pressure, heat is generated, and the molecules are crushed and exploded, producing heat and light. All this action of heat and cold are vibrating, acting on the air and tension. The coal is inert and dead, and when the heat is applied, it vibrates the air, and the air vibrates the tension. This is the first action or motion. Each molecule of air holds within it some of the tension, and when it moves, it expands, and vibrates the

air and tension within and around it. These vibrations are transmitted to the surrounding air and tension, generating heat. When these vibrations become numerous, they crowd each other, and break the equilibrium around the coal. This space now being under vibratory strain, causes the tension outside of the coal to press into this vibrating space, causing heat and light. The coal is being liberated of its atoms by the heat produced by the vibrating air and tension. The tension inside of the coal is under great vibratory strain. Its lines are being broken by the circulation around it, thus severing the force that holds it in form, allowing it to dissolve or vaporize, or go off into gas, where it came from. This coal has been produced from vapor or air, and condensed or concentrated into a solid by the cold tension of space. This has preserved it, and when the heat is supplied, it goes back into its original form or condition, for Nature to repeat her work of condensing or concentrating it into some other body or form.

The cold air and tension condenses all the gases, and presses them back to the earth, it being the point of rest; and when there is heat enough produced to raise this cold pressure from these gases, they rise again, they then being heat. This heat is pulled up by the cold tension of space, the air resists, and is heated and put in motion,

and mixes with these gases, separating them. The air carries these gases into the clouds, where they are condensed into raindrops, to fall back to the earth again, to go through the same process. This is a continuous action or work of Nature, of keeping up the circulation and life of the earth.

Wood is similar to coal. The tension is in the wood at rest; and when it is vibrated, the fibre resists, and heat is produced, the cold is raised and the atoms of the wood combine with the air, and are vaporized from the pressure of the cold. The atoms expand and explode against this cold, disturbing its lines, producing heat and light.

A PEEP INTO LIFE.—WHAT IS LIFE?

LIFE is a product of a combination of actions and principles in the human family. It is a product of male and female—positive and negative. A circuit between the two. The same as the circuit between the poles of the magnet. The magnet poles are the circuit between the sun and earth. This circuit is reproduced between male and female in contact. The nervous system acts through the tension of the body. Each nerve gives its portion of seed through this circuit.

As the nerves of the bodies are weaker or stronger, healthy or diseased, so will the product or offspring be. A diseased or weak nerve cannot produce a healthy one. The little nerves of these two bodies are concentrated to make a circuit. They are straining the whole nervous system, vibrating the tension within them. This is the life throes or action of the nerves on the tension of the bodies, concentrating all their forces to form union or circuit. This now formed, the connection is made, and the nervous fluids combined to build up a body. These bodies have acted through their nerves on the tension within them.

The nervous excitation of the male's body produced heat in it, and expanded the fluid, vibrating the nerves, and the nerves vibrated the tension, and produced the flow. The male is the sun's poles producing heat. This heat is absorbed by the female, she being of the earth's pole, cold. The cold absorbs the heat, and the heat displaces the cold, and life begins. This nervous fluid has been produced from the nervous structure of these bodies acting through the tension of space. All this condition or action is imparted to the product of these bodies. It is an impression or reflection of them through the tension; for the tension reflects all matter, and all matter is incased in it and reflected through it.

Now, the nerve seeds have been planted in good soil, and they begin to germinate and take root. Now, there is no intelligence imparted to these seeds, except through the nerves and tension, and they cannot transmit intelligence. They transmit force, in proportion to the strength of the nerves. The seed is growing under the influence and condition of the female; she being in healthy condition, the seed will be the same. This is Nature's way of producing and propagating life. The seeds are subsisting on the female's body, it being like the earth, producing vegetable life. The plant subsists on the elements of the soil of the earth, and grows and matures under its in-

fluence and condition. The seed in the female now matured is born or produced from its mother. This child has no intelligence, cannot see, cannot speak, or think, or act, perfectly helpless; but it is a product of a nervous matter under nervous tension, and these conditions are reproduced in it. This child is now under the influence or control of the parents, night and day, and they are imparting their intelligence to their child, and it absorbs into its nervous system this intelligence as fast as the nerves increase in strength. From one to three months old, the child becomes sensitive to the influence around it. This child is a product of the parents, produced from the nervous system, part and parcel of them, and it is continually absorbing into its nervous system their actions and intelligence, providing these nervous systems are in harmony with the tension. These nervous structures are vibrating on the tension, and the vibrations are imparted to the child, and absorbed by its nervous system. At this period of life, the child does not observe or notice anything. All feeling or sensation is through its nerves. Every day the nerves are growing and maturing under this intelligence around it. At five or six months old, it begins to observe. Its brain is an impression, or combination, or reproduction of the parents' brains. The child is not responsible for its life or being.

It had no will or say in coming into this world. From five months to a year old, its nerves are stronger, and it is more susceptible to impressions or influences. Its mother is continually imparting to it her love and emotions, and it is continually absorbing them. Its nerves are feeding on these affections or expressions. They are impressed on it, like the reflection of our face in the mirror. As it begins to observe, the mother's eyes reflect her intelligence and emotion into the child's eyes, and into its brain. All this is vibratory action through the nervous system on the tensions of their bodies. The child's nerves are weak and soft, and susceptible to impressions. The mother's eyes are strong and matured, and they are impressed on the child's; it not having any will or intelligence, cannot resist impressions. The influence around this child is food for its nerves. The mother is the mirror that the child is constantly looking into, and the reflection is impressed on the child, as the child's brain begins to mature. The mother is imparting the intelligence or influence of her brain to the child. If the mother's brain is cultivated, its nerves are strong, and are impressed on the child's brain, and it grows under this influence. The mother's brain feeds the child's brain.

The child is growing day by day under these influences, its brain and nervous system con-

stantly absorbing them, and living and growing under these conditions. It is like cultivating a plant. The soil is of the greatest importance. Sunshine it must have. These are the elements it lives on; but without care, cultivation, and attention, it amounts to nothing. We must love this plant and understand its nature, in order to be successful in its cultivation and maturity. It is this knowledge and its influence that we impart to the plant, and it absorbs it into its system or circulation; for it is in harmony with the brain that is cultivating it, and it grows and matures under these conditions and influences. The child from one to two years becomes more observant, takes more notice of things around it. The mother is constantly talking to it, trying to make it speak. The sound of her voice is impressed on its brain, and it tries to do what she does. She teaches it to walk, by constantly placing it on its feet, and holding it in that position until it gets used to it. This continuous application or cultivation of this child by its mother is imparting her knowledge or intelligence to her child. As it grows older, it is taught other necessary things. Its brain is more active. Its organs are becoming more developed and more liable to impressions.

From two to seven years of age, it is continually being instructed or educated. All this teach-

ing and instruction imparted to this child is an experience by its mother or the instructor. The child is absorbing their experience into its nervous structure, from its eyes into its brain, and through the body. The child is observing, asking questions, and receiving answers, acquiring knowledge or experience. It is living, growing and maturing, surrounded by this influence or intelligence, all imparted to it from others. It had none when born; but is continually gaining and acquiring intelligence or experience, which makes impressions on its brain, recording them for future use as memory or mind.

This child from eight to eighteen is being instructed, educated, or influenced, and whatever this teaching may be, it will be a fixture in its nervous and muscular structure. It being no more a child, is now a young man, receiving instructions, or a college education, or the experience of an instructor. This educator is imparting his experience to this young man, and he is absorbing it and impressing it on his mind—that is, his brain—for future remembrance or memory. At this period of life the brain has to do a great deal of memorizing, or minding. This is what develops the brain; for a thought is an action of the nerves of the brain on the tension within it, and the tension is vibrated, and records, or makes an impression, on the nerves of the

brain for future reference of thought, or, "Oh, I remember." Mind is the tension of space that the brain sounds or vibrates on. Every nerve of the brain has its range of sound vibrations, or key-notes. They do not interfere with each other. They are in perfect harmony. All the variations of sounds have their ranges of vibrations, and these act on the different nerves of the brain that they are in harmony with. A peculiar sound that the brain is familiar with is impressed on certain nerves, and when that sound is produced, it excites this nerve through the tension, and it vibrates, and sounds the tension, and this acts on the nerves that are in harmony with it. This is like sounding a firebell. All the people in the town know the sound of the bell; and the number of sounds indicate the location of the fire, and the people all run in that direction. This young man is still acquiring knowledge, or an experience, through others' experiences. This is all acquired intelligence, or education, or information. All this information is impressed on the brain, and retained there as intelligence, or knowledge and experience; and at the age of sixty years he has fully matured, but feels that he has not acquired much knowledge after all, it being an experience of others.

At the age of seventy-five years he has still been acquiring an experience, and imparting it

to others, as others imparted to him. So it is through life—one imparts his experience to another, and this is our intelligence. We were not born with it. We acquire it from others. This old man is now going to die, and he wants to know if he can take his intelligence, or acquired experience, with him. We would ask him what he brought into the world with him. He answers, he was a baby, without any intelligence, or experience, or knowledge. "All I know, I have learned since I was born into this world. I knew nothing before."

We would say: "All your knowledge and experience has been acquired from others, through your nervous system, or body. It is all artificial. It is not of nature. It is a product of man, and cannot be transmitted beyond man, but your body can have the use of it, as long as it can hold it or utilize it. Your body has occupied a portion of space. You have come from seeds and experience of others. You have grown from these seeds under the laws of Nature. These seeds have expanded gradually, filling more space. You have grown and matured, subsisting on the product of the earth, expanding and developing your body. You are a product of the earth, and must remain on it. You are part and parcel of it, and must go back to it." This old man wants to know what is the good

of all his experience, or intelligence, if he has to leave it behind. We would say that experience of his life was his enjoyment, ambitions, anticipations, recollections, associations, thought and mind, seeing, feeling, eating, drinking, tasting, and smelling, with all the beautiful things in Nature. All these he had use of as long as his body could maintain life to enjoy them.

This body is a receptacle for the tension, or vital force. This is what the nerves act on, and vibrate, and record experience or intelligence. The nerves are matter acting on vital force within the body. As long as the nerves can act on this force, disturbing it, the body can maintain life; but as soon as the nerves cease to act or vibrate on the tension, death is the result. The body occupies a portion of space, and the tension of space is through that body. The earth pulling from the sun, the body is in that pull, and offers a resistance to that pull, and heat is produced in it. The nerves resist and vibrate the tension in the body, and produce the circulation of the fluids, keeping up life. As long as heat and a free circulation can be maintained in the body, life can be prolonged. The free circulation of the pull, or tension, of space is health and happiness. Anything retarding this action causes sickness and disease, and all the maladies that the body is heir to.

A LOOK INTO THE ACTION OF COLD SPACE.

WE procure an iron cylinder, six feet long and six inches in diameter, and connect a pipe to it. We get two iron balls, twelve inches, say. We fit these into the ends of the cylinder. They must be air-tight. We connect the pipe to a freezing machine, and make this cylinder, say, five hundred degrees below zero, and the iron balls must be kept hot. The cold in the cylinder will pull the two heated balls into the ends, holding them as long as they are kept heated. This cold space is pulling the heat into it, and in so doing pulls the two balls and holds them. The balls are being heated, and the cold space is continually absorbing that heat. That is the circulation of heat and cold. As fast as the heat is applied to the balls, the cold space pulls it out, and this action keeps up the pull, or circulation.

This is similar to the earth's pull from the sun, only these bodies generate their own heat by their own pull. Now let us reverse the action of this cylinder, and see the result. The two balls are cold, and we apply the heat through the pipe in the cylinder. The result is, it expands and

forces the balls out; it repels them with great force. The earth and sun are like the two balls, and the space between them is like the cylinder. It is the cold space, pulling the heat from the two bodies. The air resists this pull, and becomes heated and expands, and this expands the tension, and allows it to stretch. This is the breathing motion of the earth's pull from the sun. This pull acts on every living thing on the earth, imparting that motion to it of breathing, or circulation, interchange of heat and cold, shrinking and expanding. The air around the earth protects it from the cold tension by resisting the pull, and producing heat, and holding it, causing the air motion, or air circulation. This equalizes and distributes the heat generated in the air space, causing a uniform heat through the lines of pull, or tension. The tension is the equalizing force. The pressure is uniform everywhere; nothing can divide it, everything can act upon it and utilize it. It is everything, finer than the finest thought of the finest brain that ever existed. This space between the earth and sun is continually being acted on by the circulation of the heat generated by the two bodies. This heat vibrates the air, and the air vibrates the tension. These vibrations are continuous, passing from the sun to the earth, and from the earth to the sun. This is their circulation. The

same as the circulation in our bodies. They impart this motion to us. We, being a product of them, must obey their laws of motion in order to live.

The heat expands the cold tension, and the earth moves or falls away from the sun. This is the motion that keeps up the heat and circulation between the two bodies. It is an interchange of action, or motion, on their bodies through the tension of space. The space between the two bodies is a vacuum of heat of a million degrees. This cold space pulls on the two heated bodies, trying to fill its space with this heat; but the two bodies will not part with their heat. They resist this pull, and the cold space pulls on their mass. The earth gives way to this pull, but the sun will not; but its atmosphere expands, or stretches, to this pull, and this produces the great light in it; for its atmosphere must stretch or expand from this pull, it having many bodies pulling on it. They are pulling in every direction, generating heat and light in it. This heat is utilized in expanding the cold tension, allowing the earth to fall or move a little from the sun. This is the sun and earth breathing their circulation, interchange of heat and cold. If the sun radiated heat into all space, without having any means of renewing the supply of fuel, it would soon become cold and dead,

but the different bodies pulling on its atmosphere, stretch it, and vibrate its tension, the same as the earth's atmosphere. The earth is a product of the sun, and whatever affects one affects the other, for they are united by the tension of space. The earth pulling from the sun generates heat in its mass. The sun resists the pull, and heat is generated in its atmosphere. All the other bodies pulling on it do the same. This is the way the sun supplies its heat and light. The sun's atmosphere is very dense; for the tension within it is in a great strain and vibration from the bodies pulling on it. This atmosphere is, perhaps, thousands of miles thick. This is all luminous atmosphere, the bodies pulling on the sun pulls all the heat and light out from the center, for the pull is outward around the circumference. This brings all the heat and light on the outer part of its atmosphere, making it brilliant. Each of the bodies pulling on it is doing work to maintain itself, and at the same time is maintaining the sun, generating its heat and light. There is no heat or action radiated or imparted only between the bodies in action. These bodies are assisting each other. There is nothing consumed or wasted. It is all vibratory action through their atmosphere on the tension of space. The pull vibrates the tension, producing heat, and the heat raises

the cold, and the vibrations are continued. This action continually disturbs the lines of tension, imparting motion and life to these bodies.

This space between these bodies is as solid as if they were united, and the action between them is instantaneous. The tension absorbs no time in transmitting its action or circulation, except through their atmospheres. This is the only point of resistance, and the heat is generated at this point, not radiated from the sun into space. This pull between the bodies pulls all the heat from their centers to the circumference. This is what makes the great light and heat in the sun's atmosphere, and causes the heat of our earth to be pulled out from it, to do work by expanding the cold tension, giving it motion, circulation, heat, light and life.

HOW A SEA-GULL FLIES.

LET us follow a sea-gull in its flight, or mode of flying and floating in the air. The gull occupies a portion of space, and the tension is in that space—that is its life force. This gull is made of a nervous matter, bones, sinews, and feathers. The feathers protect it from the cold and water, completely inclosing its body, insulating it from the outer air, thus protecting it from the cold, air, and water. This gull must procure food to keep up heat, in order to be able to fly. The food generates heat in its body. This heat displaces the cold, and allows the blood to circulate. This is a circulation of heat and cold. The blood resists this circulation, and is put in motion, and expands and vibrates the nerves, and the nerves resist, generating heat and vibrating the tension, and the tension reacts on the whole structure of the body, putting it all in vibration. The tension around the gull is constantly pressing into it, trying to find its equilibrium, or point of rest, through the body of the gull; but the body of the gull—that is, all its nerves and tension—is in vibration, thus breaking the lines of tension or force of the outside. This is the great force

that it acts on. All its little nerves are acting on a force of more than ten thousand tons to the square inch. All the feathers of the gull are connected to its body, and all feeling and sensation are conducted through them. The feathers vibrate on the air and tension. The body absorbs these vibrations, keeping up its heat and action. Every feather of the gull is constantly vibrating from the action of the air. All these vibrations are transmitted to the nerves of the gull, generating heat and vibrating the tension, keeping up the circulation and life action in its body.

The gull is like a magnet. The feathers are like the coils, generating the heat or current, to keep up the circulation; for the feathers vibrate and disturb it, producing heat, and this expands the cold, producing a pressure in its body. As long as this can be maintained with a free circulation through its body, so long can life and motion continue. The gull's feathers are smooth and soft, offering very little resistance to the air, when flying or floating in it. The air is as dense under as over the gull. It floats in this air vibrating its wings, so fine that we cannot see them. These vibrations are acting on the air under and over its body, thus cleaving its way through it. The air passing under its wings raises it, and it throws its body forward, pressing

against the wind, its wings extended and curved, bracing its body against the wind. This action excites its nerves, and they vibrate the tension of the body, generating heat, and the heat generates power or force, and the gull keeps its flight. The gull is floating in an air pressure of say fifteen pounds to the square inch. This is a uniform pressure. The gull has this to act on or float in. The gull extends its wings, and braces them on this pressure. The air is in motion, and passes under its wings. The gull elevates its wings a little, and the air passes under them, forcing it upward, without any exertion of the gull; it, bracing and curving its wings, can move and float in any direction on the air. Thus, we find that the gull can generate heat and power when in motion.

A LOOK INTO THE WATER—A FISH, AND ITS ACTIONS AND LIFE.

THE fish is a product of the male and female, a spawn, a starchy, nervous mass. This spawn occupies a portion of space in the water. The tension of space is in the water and spawn. These little eggs exclude the water, they being like fine glass beads, inclosing the tension within them. Each individual egg offers a resistance to the lines of tension, vibrating it, producing heat. The heat circulates through it, displacing the cold. This allows the eggs to grow and expand, filling more space, acting on more tension or force.

These eggs develop into little fish under this influence or condition. As they increase in size they become more active, feeding on other small fish and insects in the water, generating heat to keep out the cold and keep up the circulation. This fish has grown from the spawn, gradually pressing itself into space, forcing its way into the water, and maturing and growing under these conditions. It is now a mass of nerves, fibre, bone, and blood, all offering a resistance to the lines of tension, thus generating heat to keep up

life. The circulation of the fluids in the fish act on and disturb the lines of tension, disturbing the inner from the outer, generating heat and vibraing its whole body. This vibrating body is acting against the constant pressure of the water and the tension of space. The fish is acting on this force within its body. Its circulation is the same as the magnet. The fluids resist, producing heat and life.

WHAT IS LIGHTNING, AND HOW PRODUCED.

IF the sun holds the earth in space, that space is under strain or tension, the lines of pull extending from the sun to the earth. These lines are the same as the lines or pull between two magnets, the tension of space being constant and unvarying. It is hard to break these lines. They sustain more than ten thousand tons per square inch of surface of the earth. Now, the natural condition of space being cold, there can be no heat, except produced by the sun. Now, heat expands, and cold contracts; therefore, heat repels, and cold attracts. These are the active elements in space, constantly battling for place or rest, but cannot find it. Now, the sun being a magnet, and the earth a magnet, they are constantly pulling on each other. This is the tension of space. The air offers a resistance to these lines of pull, and becomes heated, expands, vibrates, and vibrates the tension, and the tension vibrates the air, and motion is produced. Now, the air being put in motion, is constantly crossing the lines of tension and vibrating it, and heat is generated. The heated air rises and presses up against the

cold strata of air, and there is a pressure between the two bodies. The cold presses down, and the warm presses up. This makes the air very dense, and offers a greater resistance to the tension lines, and more heat is produced between them. This may be sufficient to form a steam, and there is an explosion, thunder and lightning. The explosion breaks the equilibrium of the lines of tension, and the expansion, or explosion, of air produces a vacuum, and the air rushes into the vacuum, and produces the rumbling thunders. There are many ways of producing thunder and lightning. Again, a large body of hot air may be moving from the south, and a cold body moving from the north. The two masses meet each other, like two ships under full headway. They crash into each other. There must be friction and heat, generated by the concussion. Now, this heat is at the point of contact—that is, in the center of the two bodies. This pressure produces steam, or heated air, sufficient to explode, and the same phenomenon is produced.

This is the way Nature finds her equilibrium. The hot and cold air coming together produce a pressure. The cold air becomes heated and expands, and vibrates the tension, and the tension vibrates the air, and the heat and cold try to become equalized. Their molecules rush into each other. This action strains the tension. The

earth pulling from the sun, and the two bodies of air crossing these lines, break the equilibrium of the tension, and the heated air forms a steam, and explodes. This breaks the lines of tension, and lightning is produced. The two bodies of air meeting may be at different elevations, but moving in opposite directions; one crushes up and the other down. These bodies may be many miles in diameter, and moving at perhaps a mile a minute, and by the time they come to rest they have compressed the air to, say, one thousand pounds to the cubic foot. This heats the air and causes the explosion, producing thunder and lightning. The explosion breaks the lines of tension, and lightning is produced. Every molecule of air incloses the lines of tension, and the pressure heats them.

THE HUMAN EYE, ITS USE AND ACTION.

NOW, knowing the tension in space, everything living on the earth is moving, floating, and existing under that influence; that is its life. That tension is the force that it acts on. It is the great force of Nature. Now, the human body being filled with this tension, the nerves act on it the same as a wire acts as a conductor of electricity. Every little nerve has its work to perform. Now, these nerves could not act, or do any work on themselves. They must have something to work on. This is the resisting force. It is the equalizer and distributor of all nerve action. The nerves are incased in this tension, under its influence, and must obey it. How could a human body be built up of a mass of inert matter, having nothing to give it life or action but water and air? Both are inert and dormant in themselves. It is the tension that gives these actions; they are its subjects, and must obey its laws. Can we realize, or understand, or comprehend the great pressure that we are living in, and that pressure is our life, and the life of everything on the earth—more than ten thousand tons per square inch. Yet we live

in an air pressure of fifteen pounds to the square inch, and do not comprehend it. The eye is a ball of nerves, and little mirrors or lenses. They are floating in the tension, and these little nerves are vibrating on that tension, and communicate with the brain. When we look at some person, and our eyes meet, there is a circuit formed. Our eyes are the same as the poles of a magnet. The space between us is filled with the tension, and our eyes are acting and vibrating on it, forming the circuit.

The sensation felt sometimes by a look or stare is very trying on the nerves. If there was nothing between us as a conductor, how could we feel any sensation? Air alone could not conduct; for it is always in motion in open space. The tension never varies. It is constant and reliable. A thought is capable of acting on it; for a thought is an action of the nerves of the brain on the tension within it. Now, this action of the brain has acted on the tension, and disturbed its equilibrium, the same as if we drop a pebble in a lake—the ripples, or waves, must move over the whole surface of the lake to find its equilibrium at the shore. When we read, the space between us and the object is filled with tension, and the eyes are acting and vibrating on it. Each little nerve is doing its work, the same as the Atlantic cable. The cable may have many wires within

it, and each wire carries its message to the other shore. Now, the eyes are the conductors of all sensation to the brain, by millions of little nerves, rolled up in a ball. These nerves are very delicate and sensitive, finer than a spider's web. How could these delicate fibres act on themselves? They must have something more sensitive, more elastic, something more durable, something that cannot wear out, and something that will not produce friction. These are the elements of the tension to things that are in harmony with it. When we think, all the nerves of the body are concentrated in the brain. These nerves are acting on the tension within it, and this action continued brings all the nerves of the brain into action or thought. How could the brain think without some force to act on?

WHAT IS POLARITY—THE CAUSE AND EFFECT?

THE earth pulling from the sun produces heat in the air space of the earth. The cold tension that holds the earth to the sun is the conducting medium of all vibratory action and heat. Anything in these lines offers a resistance to them, and become polarized. The earth is one pole, and the sun the other. The lines pass down through the earth. If we put a piece of iron or steel in these lines, standing it upright on the earth, and let the sun's rays pass through it, it will become polarized. The sun's rays are the tension lines. The metal offers a resistance to these lines, and they become heated. This causes the tension to circulate through the metal. The sun pulls the heat up, and the earth supplies the cold to fill the vacuum. This is the circuit lines of the tension acting through the metal. As fast as the heat is pulled up through the metal, the cold is drawn in at the end on the earth. If there were no heat produced in the metal, there could be no circulation or action; and if there were no tension in the metal, there could be no circulation. The metal

cannot act on itself, nor can the tension. They are both inert and dead; but, when in union and vibrated, they resist each other and produce heat. The metal holds the tension at rest. It is the reservoir of universal force on tap, ready to be acted on; and when we can vibrate them rapidly enough, we can have light and power.

Now, if we change the poles of the metal, putting the end that was toward the sun to the earth, it would repel the earth, because it is in the sun's pole. The sun has pulled the heat through it, and the sun cannot act on the earth's pole. Now, the earth cannot act on the sun's pole; for they are in opposition and not in circuit. Now, if we bend the metal in the form of a horseshoe, we will have a magnet polarized. The sun's lines have pulled through it, producing the circuit. If we place a piece of iron across the poles, this forms a circuit of the magnet, and if we make and break this circuit, we are acting on the tension or pull of the earth and sun through the magnet. The bending of the metal into a horseshoe shape brings the earth's poles and the sun's poles together, so that they can be utilized or acted on.

Now, the earth's pole is the inlet for the cold tension of space, and the sun's pole is the outlet for the heat generated in the magnet. This is the circuit through the magnet of heat and cold.

The magnet is cold in nature, inert and dead. When we act on it, we produce heat. This heat must have an outlet. The cold tension of space pulls this heat up as fast as generated. This is the great tension pull of space.

The magnet is the medium for the circulation of heat and cold applied to it. The tension is the conducting medium for transmitting or absorbing the heat. The action on the magnet vibrates it, and makes heat in it, and the vibrations act on the tension, and cause the circulation or flow, and the circuit is produced. The tension on the outside presses around the magnet and into the poles. The tension inside, being in vibration, gives away to the pressure of the tension outside, and the circulation takes place through the poles of the magnet.

Now, the magnet must be able to transmit the vibrations, or heat, as fast as produced; for every vibration is a quantity of heat. The atoms of the magnet resist the vibrations, and become heated. This heat must be absorbed as fast as generated, in order to keep up a free circulation. The heat expands the atoms of the magnet and clogs the circulation. If the magnet is kept cold, its atoms are then shrunk and in harmony with the tension, and leaves a free action. The magnet, and its actions, are only an interchange of heat and cold. The cold is the great weight, or

pressure, that the heat has to overcome or displace. When we produce heat, we expand the cold tension, and put it in vibration, and these vibrations are instantly transmitted to the cold space between the earth and sun, this being the receptacle for all heat generated between the two bodies. The air resists the passage of this heat through the tension, and it becomes heated and expands, and is put in motion and vibrated, and vibrates the tension, and this interchange of action keeps up the heat in the air.

To illustrate the action of the magnet, we will take a piece of bar iron, any suitable size for a magnet, and drill several holes through its center, making it tubular. We then bend it into the magnet form, and wind it as a resistance coil. Now, if we can lay it flat in the bottom of a barrel, carrying the conductors to the top of the barrel, and then fill the barrel with water, and apply the current to the magnet until it becomes heated, the result will be the water will circulate through it. The cold will enter at one pole, and the hot discharge at the other, thus forming a circuit. The current heats the magnet, and the magnet heats the water. This vibrates the water and gives it motion. The cold water constantly presses all around the magnet, trying to find an entrance or an opening. The water in the magnet becomes heated and expands, and is forced

out through one pole, and the cold presses in at the other pole.

The cold displaces the heat, and the heat displaces the cold, and so the circulation is continued. The cold water absorbs the heat; it pulls it up through the lines of tension. The water, resisting, becomes heated. We must have heat and cold to produce motion. The cold absorbs the heat, and the heat displaces the cold. They are seeking an equilibrium or a point of rest. The pressure of cold water around the magnet is the same as the cold around a common magnet. Once there is heat enough produced to form a circulation, the cold presses into the pole and out of the other one. Once the tension in the magnet is vibrated, it gives way to the tension around it, and the circuit is continued.

HOW CAN WE BREAK THE TENSION LINES OF SPACE AND KEEP THEM OPEN?

WHEN we can do this, then we have tapped the fountain of life and force. This holds the earth in space. Now, the earth being suspended from the sun, the space between them must be in great strain. If this space was filled with a solid rod of steel, it could not sustain the great pull or weight. What bar of steel could sustain ten thousand tons to the square inch? Yet the tension, or pull, does it, and we do not comprehend it. The tension being elastic, like a rubber band, can shrink, and expand, and stretch, but cannot be broken, yet may be acted upon and vibrated. The most delicate vibration acts on it, producing waves like the waves of the ocean, only they travel faster, there being no resistance offered to them. When we can produce vibrations rapidly enough to pass through a conductor so that the waves of the vibration will roll over each other and prevent the tension resting—that is, keep the space around the conductor in motion or vibration—this would disturb the lines sufficiently to break their equilib-

rium and thus produce luminosity—light, the same as daylight or sunlight. These vibrations must be very fine and rapid to act on the tension—say, fifty million magnetic vibrations per second. These vibrations must be produced instantaneously, and must be continuous, no variation or cessation. It must be constant. There is no rotary motion at the present day that can accomplish this. We must look for some other motion to do it; yet Nature is doing this continually, without fuel, steam or engines. Why can not man do the same, he being an instrument of Nature, and Nature working through him? But men do not live in harmony with Nature's laws. If they did, they would understand them better. Man's laws and Nature's laws do not harmonize. There are no secrets in Nature's laws; everything is open for investigation. If we are ignorant of these laws, it is not Nature's fault.

WHAT IS THE TENSION OR PULL?

LET us suspend a rubber ball by a rubber band. Say the ball weighs ten pounds. This will represent the earth suspended from the sun. The band would be about the one-hundredth of a square inch in diameter. Raise the ball, and attach the band to the ceiling. It will stretch the band to its utmost, almost breaking it. The band is now in the tension, pull or strain. If we touch it, or force the air across its lines, it will vibrate, and the vibrations will cause the ball to rise and fall a little. The longer the band the more sensitive it is. Now, if this band was ninety-three millions of miles long, how easy it would be to vibrate its lines; how sensitive it would be! It would be impossible to keep it still.

When we touch this band, we act on a force of ten pounds. But suppose this band sustained one hundred tons, as it does in space; then it would be acting on a great force or pull. If we apply a piece of ice to the center of the band, it will shrink a little. This will cause the ball to rise a little. Remove the ice, and the ball will fall again. This motion produces heat in the

band, and it acts on the air, vibrating it. The air, offering a resistance to the shrinking and expanding, becomes heated.

The ball, rising and falling, produces heat in the band, and the heat rises and vibrates the air, and the air vibrates the band. This produces a kind of pulsation, or breathing motion. Now, imagine all space between the earth and sun filled with these lines or bands—invisible lines. This is the great tension of space. The space between the earth and sun is filled with cold. The air around the earth resists or insulates it, and protects it, by retaining the heat imparted to it by the sun's pull.

The earth pulling from the sun, the air offers a resistance to this pull, and it becomes heated and expands, and expands the lines of pull. This allows the earth to drop or fall a little, and the cold space pulls up the heat generated by the fall; and, in pulling the heat, it pulls the earth. The heat in rising vibrates the lines of pull or tension. These vibrations heat the air, and the air heats the tension, and the earth falls again. This is a shrinking and expanding motion. The cold shrinks, and the heat expands. As soon as the cold has pulled up the heat, the heated space is filled with cold. This pulling and falling, shrinking and expanding, keep the air heated, and put it in motion, and vibrate the tension,

and the tension vibrates the air, and this keeps up action, motion, heat and life. This motion is imparted to every thing on the earth; for its lines pass through them, and they resist, and heat is generated, producing the circulation or breathing motion. This is the circuit of the sun and earth, their life action, and circulation of heat and cold, all vibratory action on the cold tension of space.

A PLANT'S GROWTH.

WHAT is the cause of a plant's growth? Water, earth, heat, air, and tension. We plant a seed in the earth. It contains water, vegetable matter, and tension. The moisture of the earth expands the seed. The sun acts on the tension and vibrates it, and the seed offers a slight resistance, and heat is generated in it. Now, the lines of tension from the sun, passing into the earth, pass through the seed, and keep it in constant strain and vibration. These vibrations are pulling on the tension. The earth pulls from the sun. The earth pulls the roots into it, and the sun pulls the bud or leaves towards it. The pull being equal, the plant grows toward the sun and the roots grow into the earth. Now, the the branches and leaves grow up on the tension lines. These are the guiding lines toward the sun. The roots follow the tension into the earth, to seek for food.

Now, the earth feeds the roots, and the sun and air feed the branches and leaves, by evaporation. One assists the other, and harmony prevails. The different gases are deposited in the fibres or tissues, as they are pulled upward, build-

The lines of tension are through the tree to the pressure of more than ten thousand tons to the square inch. Its circulation is vibrating on this force. The inside of the tree is all in vibration, and the tension outside is constantly pressing around the tree, trying to disturb the lines on the inside, causing an external pressure. This keeps the trees in great strain, or under pressure forcing the sap upwards, expanding its branches and leaves. Thus we find a pressure inside and outside, and the sun pulling on the branches, and the earth pulling the roots, extending them in all directions, to seek light and food, to maintain life.

The trunk and branches of the trees are held in form by the pressure inside and outside. The inside is heated and in vibration, expanding the sap and fibre, producing a pressure. This would burst the tree, if it had nothing to resist this pressure; but the tension and air is resisting this internal pressure, keeping the trunk and branches in form, making them tough and solid. The leaves grow out on the branches on the lines of tension. These are the guiding lines toward the sun. The different-colored leaves are caused by the different ranges of vibrations. These colored leaves are like a shadow in this tension. The leaves offer a resistance to the lines of tension. This resistance produces a certain quantity of

vibrations, and this produces the various colors. The leaves hold the tension in them. They cannot get out of this tension; for it is solid everywhere, and the leaves are an impression in it, and it reflects the colors through them. These leaves have a circulation through them like our body. They have thousands of little veins distributed all through them. This circulation is heat and cold. The heat vibrates the tension in the leaf, and the fibre resists these vibrations, and heat is generated. This expands the sap, and causes circulation, and the tension and air around the leaves are pressing against the heat. They are seeking an equilibrium, or a point of rest; but the heat will not let them rest. This is what keeps up the heat and circulation, and the battle goes on, and life is continued.

ACTION BETWEEN THE EARTH AND SUN

HOW could there be any action between the earth and the sun if there was no conductor? All space being cold, how could heat pass through it—ninety-three million miles of intense cold—before it reached the earth? Heat could not pass through the cold and produce heat in open space. It is at least a million of degrees below zero, between the earth and the sun. This cold shrinks and pulls the heat into it, for cold absorbs heat. Now this cold space would be continually absorbing, or pulling, the heat from the earth and sun. This action would keep up the tension between the two bodies. The earth pulling from the sun would produce heat at either pole. The air space of the earth offers a resistance to the lines of pull or tension, and becomes heated, and expands, and vibrates. This action allows the tension to expand, or stretch. This produces heat, which is absorbed by the cold space. All this action is doing good work. There is nothing wasted. The air vibrates the tension as the heat rises, and all the space to the sun is acted on and vibrated. The more the cold shrinks and pulls the greater the heat and work

done. The greater the cold, the greater the pull. These actions are continuous.

If there were no space for heat there could be no action or motion. Now, heat being a product, it acts on the tension of the air space, and sets the air in vibration, and it vibrates the tension, and transmits these vibrations back to the sun: The heat being absorbed in the cold space, the heat does vibratory work to the point of absorption, or till it is lost in cold space.

The sun and earth pulling from each other produce the heat in the atmosphere. It expands, and the earth drops or falls a little from the sun. This acts on the tension or lines of pull, and the cold space pulls the earth back again. This action is like the piston in an engine cylinder. It is like our breathing. It is the breathing of the earth and sun; for the same effect is produced in the sun's atmosphere. When the earth falls, it pulls on the air space of the sun and expands it, and produces heat and friction. The sun having so many bodies pulling on it, extends its atmosphere, and makes it very dense. All the heat in the sun's atmosphere produced by the earth's pulling does vibrating work, through the tension to the earth, and is then absorbed or pulled into the cold space. This cold space is a receptacle for all heat generated by the two bodies.

The cold space is the great pulling force. It will not let the two bodies separate; for they are heat-producing, and it is heat-absorbing. As fast as the heat is generated, it pulls it; and in pulling it pulls the two bodies together, and holds them at proper distance. This distance is depending on the amount of heat they generate and the amount of heat the cold space can absorb, or take up. It has been many times asked what becomes of all the heat given out by the sun and earth. They do not radiate heat. It is absorbed between the bodies pulling from each other. There is no action only on the lines of pull, and that is within the lines of the atmospheres. All other space is inert and dead. The interchange of heat and cold are the active principles of all life and action.

The sun and earth breathing produce heat, and all animal life does the same. The breathing is a vibratory action on the tension of the nervous system. The nerves are vibrated, and vibrate the tension, and the nerves resist, and they produce heat, and the heat displaces the cold, and the cold absorbs the heat, and this keeps the circulation, or pulsation, in action. Thus we find all action or motion is the result of shrinking and expanding. This is the secret of electricity—magnetism. It is the molecular motion. The heated molecules repel the cold mole-

cules, and the cold molecules attract and absorb the heat, and this expands the cold molecules and this produces motion, action, and life.

EFFECT OF THE AIR ON THE EARTH.

NOW, if there was no air around the earth, there could be no heat, light, or life. The air molecules are continually in motion, and produce heat and hold it. This heat has to fight the cold. The cold devours the heat, it being more powerful; for all space is filled with it. This cold must be a great pressure. If we freeze a block of ice, and reduce the temperature around it, say a thousand degrees below zero, the ice would disappear in vapor. It would be crushed as if a hundred-ton trip-hammer had fallen on it. That is the great pull or tension pressing around the earth. It would crush it like the ice, only for the air shielding it. The air is elastic and retains the heat; so it is a ball of heat rolling in a space of cold. The cold lines pass down through the earth, the air being the insulator. This pressure holds it together, like a ball suspended in water; the pressure is all around it. How could the earth revolve in space without something to hold it together? This cold pressure, or tension, offers no resistance to the motion of the earth—it not being a substance—only a shrinkage or pull. This pressure presses everything to the

earth. This is what we call gravity or attraction. If we take a piece of metal and throw it upward, the pressure resists it, and it is pressed back to the earth, the point of rest. Was it the earth that attracted the metal, or the pressure against it? If the air was all heated, it would not press against the earth; it would ascend. But as the heated air ascends, the heat is absorbed by the cold space, and then pressed back to the earth. This is the heating and cooling process of producing air motion. The heated air in ascending carries the moisture from the earth, and it is condensed against the cold air and pressed back to the earth, to be repeated.

The space we are living and moving in, if there was no air in it, would be very cold—say, one thousand degrees below zero. This great cold would shrink and shrivel all animal and vegetable life. Imagine ourselves in this cold for a few moments without air. The flesh would shrink, and become dry, and flat, like a sheet of paper. The blood would crumble into powder. The sinews would harden like glass, and the bones would crumble into dust, and all the moisture of the body would look like fine snow. All the nerves would be dried up like threads.

This is the great enemy that we have to fight every day we live. It is the great tension that fills all space, and our bodies are floating in it. Now,

the air can circulate and move through this tension and become heated, and expand, and vibrate. This acts on the nerves, and sets them in motion, and they on the fluids of the body, and this produces heat. The heat acts on the tension and vibrates it, and the tension on the nerves, and the nerves on the heart, and the heart on the blood, and the blood on the lungs, and vice versa. This is all—vibratory action of heat and cold shrinks and expands. The heat is in motion, rushing around through the circulation, trying to displace the cold, and the cold is pulling the heat out through every pore of the body. Now, the heat has to be active to keep the cold out, for if it got in, it would be death. Heat is life and cold is death, so it is a battle for life and death. We inhale cold air, it meets the blood in the cells of the lungs, and causes them to shrink and expand. This action is like a bellows; it is vibratory, and keeps up circulation. This heat is trying to keep out the cold. These two actions act on the tension and keep it in vibration, and the vibrations act on the nerves, and keep up heat and life. While all this battling is going on in our bodies, the air around us is in motion. This is heating the space around us, protecting us from the cold.

The molecules of air rub and grind against each other, and their friction produces heat and

motion. The heated molecules are attracted by the cold and shrink. This action is constantly going on around and in our bodies. The air molecules become heated and expand, and are set in motion. The cold catches these molecules and shrinks them; this causes each one to vibrate, and it vibrates the tension. This puts them in motion, and motion is life. If we observe, a very cold night, skating on a pond, or lake, if we strike the ice with a stick, the sound will travel to the extremity of the pond or lake. It is then in tension, being shrunk and pressed from the cold pressing through and around it.

Again, if we notice, an ice boat can travel faster than the wind. The ice offers no resistance to motion. The boat gains momentum, and goes before the wind; but if the ice is thawing, it offers a great resistance, and will produce no sound.

Again, of a cold, clear night, a steam whistle can be heard for ten or more miles. The air is in tension; the moisture is squeezed or pressed out, and it is dry. Sound travels like the ice boat. The cold, dry air offers no resistance to the momentum of the vibration. They slide through the air on the tension, like the ice boat; but if the atmosphere is heavy and moist, sound cannot penetrate it far. The moisture or fog insulates and separates sound. Every molecule of moisture offers a resistance to its motion.

WHAT IS HUNGER AND THIRST, APPETITE?

THE body is a mass of nerves, sinews, bones, and moisture. All the nerves are in action, and fighting the cold. Every little nerve has to continually fight against this cold to keep it out of the body. This fighting and struggling wears out the nerves, and they become weakened or hungry. All the nerves depend on the stomach for food. They are continually drawing supplies from it, and if it becomes exhausted, the nerves cry out for more, and the stomach must supply them. This is the sensation of hunger. It shrinks the stomach and all the nervous system. This allows the cold to press in. Then comes the great battle for life. The nerves want food to fight the cold. The blood begins to get cold. The circulation grows slower; the nerves and stomach are under great strain. They exert all their force to keep up action. They are using the fat of the body, the stomach being exhausted. The cold is gradually gaining on the heat. It is being reduced by the nerves feeding on the body. The blood becomes thin. They all cry out for food through the stomach. The brain becomes

dazed, for its nerves are weakened, as it receives no food. The nerves of the body exhaust it all. The moisture becomes reduced, for the heat is being extracted, and it carries the moisture with it. The nerves and circulation seek the stomach for water to quench their thirst. The nerves become feverish; the blood becomes hot, and the brain almost burns. This is the last struggle. The nerves are devouring or consuming themselves. They try to force out the cold, but it is constant. It makes no struggle. It is slow, but sure. It lets the heat do all the fighting until it becomes exhausted; then it takes possession, and quiet prevails. The body is a product of heat. It has encroached on the cold, for it is occupying its space; for all space is cold, and anything occupying any portion of that space must fight for it.

Now, everything living must be prepared to resist the cold. It must, therefore, be able to make heat. It must be of a nervous nature, able to vibrate through its own structure. These vibrations act on the tension in themselves, and react on the nerves, and the nerves resist, and heat is produced. Now, the cold presses against the surface of the body, and the heat inside the body expands, and the cold shrinks, and this produces motion or circulation. The cold pulls the heat out of the body, and cold passes into the

body, and expands, and becomes heated. This interchange of heat and cold keeps the nerves in vibration, and keeps up the heat and life as long as the two are mutual. They produce harmony in the body. The cold is constantly absorbing the heat, and it must be replaced as fast as exhausted. Food feeds the stomach, and it feeds the blood and nerves. They vibrate the tension within it, and it vibrates all the nervous system, and this keeps up action, circulation, and life. The heart is the bell to sound the alarm to all the arteries and veins to open their gates for the circulation of the blood. The beating of the heart is vibratory. It vibrates all the nervous system, acting on the tension in the body. Every beat of the heart produces heat by vibrating the nerves, and the nerves vibrate the tension. The body is a circuit inclosed from the outer air and tension. The skin incloses the circulation and protects it. Inclosing the circulation of the fluids of the body, these fluids are governed by the action of heat and cold. As soon as the air is taken into the lungs it becomes heated, and expands, and heats the fluids, and they are put in motion. The breathing acts on the tension, and the tension on the nerves and fluids, and this keeps up the heat in the body.

Now, all space being filled with tension or cold, the body must be able to act on it. The body is

a product of heat. This heat must fight the cold; so life is a battle between heat and cold. This body must have some way of generating heat to resist the cold. The body occupies the space belonging to the cold. This cold is constantly fighting the heat of the body. As fast as heat is generated, it is extracted by the cold, and this keeps up a flow, or circulation, of heat independent of the fluids of the body. The cold presses into the body, and becomes heated and expands, and forces the cold out by heating it. All the nerves are vibrated, and they vibrate the tension, and the tension the whole nervous system. The nerves are the resistance coils of the body. They resist the vibrations and retain the heat. All the action in the body is vibratory. The circulation of the fluids is a circulation of heat and cold. The body takes in cold and gives out heat. If the body could not generate heat as fast as extracted, death would ensue; and if the heat generated by the body could not be carried off as fast as produced, it would consume it. One is necessary to the other to produce action or life. The cold is inert and dead; no motion, no action, dead and rigid as a block of ice. Now, anything that can vibrate this cold tension will make heat — for it acts on a great force, or pressure.

A LOOK INTO A SUNBEAM.

IF we allow the sun's rays to pass through a small opening in the window, what can we see? All kinds of dust, particles of everything in the room, floating in the air. All in motion, not two have the same movement, all going in different directions. What is the cause of this? The air is not in motion. There is no circulation in the room. Every particle floating in the sunbeam is of a different size and form. Every particle offers some resistance to the sun's rays or lines. They contain some matter, and this matter holds some of the tension in it, and this is vibrated, and the vibrations produce heat, and the heat produces motion.

Now, every particle, being of a different size and form, has a different motion. The sunbeam produces heat, and sets the air in motion. The heated molecules ascend, and the cold molecules rise and absorb the heated molecules. The heated molecules repel them. Then comes the battle between the two. The heat repels and the cold attracts; the heat expanding, and the cold contracting, acts on the tension, and it vibrates the air, and the air expands and vibrates the

tension. The cold air circulates through the hot, and this produces shrinking and expansion. This acts on the tension and the air, and motion and heat is produced.

A molecule of heat and a molecule of cold air coming in contact, the cold being a vacuum of heat, it will pull or shrink the heat into it. The heat repels the cold when they meet. Heat expands the cold and the cold shrinks it. This causes a collision or commotion, or a kind of explosion, when they meet. The cold molecule expands when it has absorbed the heated molecule. This mingling and interchange of heat and cold, shrinking and expanding, colliding and exploding, repelling and attracting of the molecules, or atoms, produces motion, action, and life.

This action is throughout everything on the earth, from the smallest molecule to the largest animal, and from the smallest plant to the largest tree. That is the commotion that keeps up their circulation and life. All life must have circulation—for we see every particle in the sunbeam in motion; the air is in circulation through the sunbeam. It rolls around, as if in a cylinder. It projects all particles toward the lower end of the beam. Now, this sunbeam gives life to all the particles within its rays. These rays are like the tension lines that penetrate everything on the

earth. These lines are through everything, and at rest until vibrated, and then they are put in motion, and heat is generated by this motion—for the air resists all motion, and it is heated. If we could look into a piece of iron under the sun's rays, we would see a circulation through it like the sunbeam. The tension in the iron would be vibrated, and the tension on the outside would press into the iron and keep up the circulation of heat and cold.

pies a portion of space. Its body incloses a portion of that space, and it is acting on the tension in that space. That tension is more than ten thousand tons to the square inch. The fly vibrates its nerves against that force. That force is in the fly and around it—the pressure is equal everywhere; but the vibrating of the nerves of the fly separate it from the outside pressure. This action causes the outer pressure to press into the fly, and causes the discharge, or flash of light. The vibrating of the fly's nerves makes and breaks the lines of tension.

The glow-worm is like the fire-fly. It is a mass of fine nerves that are constantly vibrating on the tension. These vibrations are so fine and rapid that they act on the tension and vibrate it, and it vibrates on the nerves, and this produces the glow-light. These lines of tension pass through the worm, and the vibrating nerves disturb these lines, continually agitating them.

The worm is like a coil of fine wire wound spirally. It has millions of fine nerves. These nerves are of a spiral form, the circuit running around the worm. When it moves, it acts on the tension and disturbs its lines, and produces the glow, or light, or luminosity. The worm occupies a portion of space, and the tension is in that space. The worm offers a resistance to these lines, and there is heat produced in it, and its

nervous structure is vibrated, and these vibrations are imparted to it. The tension around the worm is constantly pressing into it. This action disturbing the lines in the worm from the lines on the outside of the worm, and the glow, or light, is produced; there is no combustion or liberation of heat in this worm. It is simply an excitation of its nervous system through the tension in its body. The tension in the worm is in vibration, and is heated, and the tension around the worm is solid, and constantly pressing around it, trying to crush out its heat. This action keeps up the heat and light, and the vibrations are continued, and life goes on.

THE LEYDEN JAR, AND ITS ACTION.

THE jar, or bottle, incloses a portion of space, and the tension is in that space. The tin foil insulates this tension from the glass, and the tin foil on the outside insulates the outer tension, thus separating the jar completely, or insulating the glass from the tension and air. The glass, being a non-conductor, divides the lines of tension. This prevents the inner tension connecting with the outer. The tin foil is non-vibratory — that is, will not sound, or conduct sound. It divides the vibration; therefore, it is a good insulator.

Now, the inside of the jar being separated from the outside, they cannot communicate with each other. Now, let us charge the jar. The current is applied and it is charged. It contained air and tension before charging, and what does it contain after charging? The tension and air in the jar has been vibrated and strained. The air molecules have been heated and expanded. This makes a pressure in the jar, and the current has compressed or condensed the tension—that is, the jar was full of the same force that we charged it with, and the charge put the tension in the

[illegible] of the jar at

[illegible] and it has
[illegible] break these
[illegible] ples of air out
[illegible] are in vibration, and
[illegible] The jar, being in-

sulated, confines this action to the inside, the outside constantly pressing in. The glass and tinfoil insulates these lines; but the pressure is constant.

Now, the jar being insulated inside and outside, the space inside is all in motion and under pressure from the charge applied to it. When it is discharged, the pressure on the outside presses in, and oscillations occur, and light is produced. Each molecule of air is inclosed in the tension under strain, and the jar is discharged. The air molecules break the lines of tension and produce the light.

[illegible] BODY.

[illegible] changing in the [illegible] sponge [illegible] are [illegible] the [illegible] the fluids [illegible] matter, and are [illegible] are the [illegible] lead of the [illegible] them. When we [illegible] bodies reflected [illegible] bodies, only it has [illegible] nerves, and no life. [illegible] through the [illegible] like a shadow. Now, [illegible] as if the matter [illegible] and left its impres-[illegible] tension ignores matter. [illegible] matter is incased in it [illegible]

[illegible] apply a current of elec-[illegible] so as to act on the tension [illegible] incandescent—that is, to have the tension luminous—the form of the body would

be visible only. The matter would be invisible. There would be no shadow lines, for there is no space that it does not occupy. Think of a body luminous without heat. Can it be done? It is not impossible. Twelve hundred to fifteen hundred volts kill a body, but do not make it luminous. How can we increase this force and not kill the body? This force as applied is too slow. All the nerves resist this slow current. It must be rapid, to catch the tension of the body and not the nerves. When we can produce vibrations rapidly enough and fine enough to act on and vibrate the tension, then we can illuminate. not only the body, but all matter and bodies.

These vibrations must be rapid and continuous. No rotary motion can accomplish this. It must be done as Nature does it.

Now, if we should illuminate a rock, and make it incandescent, the material of the rock would be invisible; and if we should keep increasing the vibrations, the rock would crumble into dust. The tension in the rock would be vibrated so rapidly that it would be separated from the tension outside. This would divide all the atoms of the rock into invisible particles, and they would dissolve and fall in dust to the ground; and if we should gather up all this dust and combine it with water, and put it under a great pressure, it would become a rock again. This pressure forces

all air and gases out of it, combining its atoms. This binds the tension in the rock, and the pressure applied to the rock has compressed it into a smaller space than it occupied before the pressure. This causes the tension to press all around the rock, keeping it in its present form. The tension in the rock and the tension outside the rock are united—that is, the pull is uniform through the rock, and it is pressed together, holding or keeping its form. The rock cannot get out of this pressure. Once formed, the pressure is equal everywhere.

WHAT IS ATTRACTION AND COHESION?

ALL space is filled with cold tension, pressing around the earth, pressing everything to it. This tension holds the earth in its present form. The earth is the receptacle for all condensed matter. All the heat and moisture arising from the earth are pulled up into the cold space of air, and condensed and pressed back by the cold tension after the heat has been extracted. Now, the cold tension of space pulls all the heat up from the earth, and presses the cold down to fill its place. This cold space pulls all heat generated by the earth. This pull holds the earth to the sun. This pull is not attraction or cohesion. It is the pull for life. The cold tries to pull the heat from the earth, and the earth fights, and resists, and struggles, to keep up her heat as fast as the cold absorbs it. This is the struggle for life between heat and cold. Heat is life, and cold is death. The cold presses everything to the earth, and the heat is pulled up from the earth. This allows the cold to press close to the earth. As the heat is pulled up from the earth, the cold is pressed to the earth; this is the circulation of the earth, and its life, action, and motion.

Now, if we throw something upwards, it is pressed back again to the earth, it being the point of rest. The cold pressure around the earth resists all heat. The heat resists the pressure of cold through the lines of tension, and transmits it into the cold space; so it is a continual interchange of heat and cold, shrinking and expanding, to keep up motion and life.

Any matter that we may throw from the earth has been condensed by the cold tension of space. This cold holds this matter in its solid form, and gives it weight in proportion to its solidity or fineness of its atoms or molecules. All matter on the earth is a condensation of the cold; it holds it at rest. Now, let us apply heat to this condensed matter. This heat raises the cold pressure from around it, and allows it to vaporize. This vapor is heat, and this heat is pulled up to the cold space and condensed, and pressed back to the earth, the point of rest. Now, this heat is not weight. It has lifted the weight from the condensed matter, and it became a vapor, or gas. This gas will condense against the cold-air space, and be pressed back to the earth after all the heat has been extracted from it. Now, this condensed gas will become weight again—for the heat has been extracted from it, and the cold took its place, compressing it into a smaller space. Holding it in this form, it cannot get out

of this pressure until the heat liberates it again and gives it motion. Is this attraction, gravity, or cohesion, or pressure?

COHESION OF MATTER.

THE cold tension of space presses all around and through the earth, and everything on it. Let us take a common piece of iron, and file it into dust. The particles of this dust have no attraction, or cohesion, or affinity for each other; they are individual atoms. The same pressure is around each atom. They being separate, the tension is in and around each atom, thus separating them completely. We place these filings in a crucible, and melt, or combine, these atoms in a furnace. Let us see what takes place in the furnace. We apply heat. This heat has to displace the cold sufficiently to allow the atoms of iron to become fluid—that is all; the cold must be expelled. This leaves the heat space a vacuum of cold—that is, the heat has made a hole in space, for the furnace occupies space. Now, this must be a great heat to be able to displace this great weight of cold. One is equal to the other. The heat removes or raises the pressure of the cold from the atoms of iron, and allows them to flow or unite, thus giving them free motion in a fluid form. This fluid has expanded, filling more space than when cold. As

long as this heat is maintained, the metal will remain fluid.

Let us watch the cooling process. The cold is constantly pressing into the heat, trying to displace it and drive it out. The cold gradually presses all around the fluid, it being now one mass, all united by the heat. The cold gains on the heat, and is pressing it into a smaller space, compressing its molecules, or atoms, together. This is the pressure of the tension of space. As fast as the heat is removed, the cold presses in and around the metal, and makes it solid. The heat now all removed, the cold has conquered and taken possession of the iron, and there is no more action.

Is this attraction, cohesion, or pressure? The cold squeezes the metal into its own embrace—that is, it presses everything that resists it into as small a space as possible.

The heat produced in the furnace must be equal to the cold displaced. The heat raised the pressure of cold from the metal, and it became a fluid. One pressure expels the other. This is simply an action of heat and cold. The cold is solid everywhere around the earth. The air offers a resistance to the circuit of the heat and cold through the tension. The air retains a portion of this heat, and is put in motion and pulled up and condensed in the cold-air space

after all the heat has been extracted from it. For every degree of heat we produce, we have to raise a degree of cold. The cold is the dead pressure, a weight that nothing but heat can raise. This dead weight or pressure is in and around everything on the earth, and in to the center of the earth. Its lines are solidly connected around and through the earth, and the heat in the earth raises that amount of cold and allows it to become a fluid, or molten. The metal, when in a fluid condition, is in life, and, when cold, is in death.

WHAT IS COMBUSTION, OR LIGHT—CANDLE LIGHT OR OIL LIGHT?

LET us see what is in a common tallow candle. The grease is a product of heat. The candle occupies a portion of space. The wick is a cotton fibre, a product of heat. The candle is cold and dead. The cold tension presses around and through the candle. Now, we will light the candle. The heat must displace the cold space of the flame. The wick is a fibrous texture. The tension and air is assimilated all through it. The heat applied to it expands the air and sets it in vibration, and vibrates the tension. The cold air resists the heat, and the heat resists the cold, and so the battle begins. The cold tries to freeze out the heat, and the heat expands and presses against the cold. This puts the flame space in commotion or strain. It is in a vibratory condition. The tension is so hot that it shines, or gives light, the same as a piece of glass taken out of a furnace. The glass would be incandescent, like the tension of the space the flame occupies. The heat vibrates the grease of the candle, and separates its molecules, vaporizing them, and they combine with the air and

[illegible] producing
[illegible] interchange
[illegible] expanding of
[illegible] the medium
[illegible] sufficient quan-
[illegible] disturb its
[illegible] becomes luminous
[illegible] in a similar way.

The air is heated and vibrated, and combines with the oil, and it expands and produces heat, and the heat displaces the cold, and the combining of the air and oil expand and explode. Each molecule of air absorbs a molecule of oil, and they ascend and explode at the point of greatest resistance. This is a constant bombarding of the molecules against the lines of tension. This action continually disturbs and agitates these lines, throwing them out of equilibrium. This prevents the tension from connecting its lines. The cold constantly presses around the heat, trying to crush it out, and the heat keeps up the struggle, trying to force out the cold. This is a battle for life between the two giants, and their struggle produces light and heat.

WHAT IS THE CAUSE OF AN ELECTRIC CURRENT AND WHY DOES IT FLOW?

The body is built up of a nervous matter, bone, blood, and flesh. This body is in contact with the ether—that is it has grown up in it, and is a part of it. This body offers a resistance to the lines of tension, and it becomes heated. The tension in the body is vibrated by the heart, and the nerve and fluids resist these vibrations, and retain the heat, and this puts the fluids in motion, or circulation. This causes the tension to be continually agitated and vibrated, putting the whole nervous system in motion or action. The tension on the outside of the body constantly presses all around it, trying to find an entrance, the skin of the body being the dividing line, the inside of the body being in vibration against the constant pressure outside. The inside is disturbed, or separated, from the outside. This causes a greater pressure on the outside than if there were no action or circulation inside. This is the action that keeps up the circulation. This circulation is constantly disturbing the lines of tension in the body, disturb-

ing them from the lines outside the body. This action makes heat in the body, and the heat expands the fluids, and they are put in motion or circulation, and this action keeps up life.

Now, if we apply a weak electric current to this body, it will heat it—for it will offer a resistance to it. The nerves and fluids are the resisting medium. The tension of the body is too fine for this current to act on. The vibrations are too coarse and slow to catch the lines of tension.

Let us apply a current sufficient to kill this body—say, fifteen hundred volts. This current does not act on the tension of the body; it acts on the matter of the body. This matter offers a resistance to the circuit, and all the fluids and structure of the body become heated. The vibrations of the current are like a hammer pounding on this body. Every vibration crushes a portion of the structure of this body. So this current is a continuous pounding on the structure of the body, producing heat in it. This heat is sufficient to destroy the nervous structure of the body, producing death. Now, the nerves of the body being crushed by this current, they cannot act on the tension within it. They cannot vibrate it. The blood cannot circulate; the body begins to get cold. The tension outside gradually presses in. The heat is being ab-

sorbed by the cold; the nerves cease to act, and the circulation is at rest. The tension in the body, and the tension outside the body, have united through the body, and it is rigid and at rest. As soon as the vibrations in the body cease, the space it occupies cannot resist the pressure of the tension on the outside, and it presses in, displacing all the heat, and the body is at rest; the cold having taken possession of the heat, there can be no more action or life. The body is in equilibrium, and we apply the current to the body. This destroys its equilibrium, making it rigid. It arrests all action and circulation. This current that we apply, over supplies this body with its life force. This body was full and could hold no more, but the current acted like a compresser, stuffing this body, arresting all action, circulation, and life. This may occur without injuring any of the tissues of this body.

Now, let us apply a current that will act on the tension of the body and not on the nerves. This must be very rapid and fine—say, fifty million magnetic vibrations per second. Now, the body is occupying a space where the tension, or pressure, is more than ten thousand tons to the square inch. We must produce vibrations that will harmonize with this tension—that is, they must travel on their own lines. This will

not effect the nerves; it will act on the tension of the body, and it will become incandescent, or luminous. The matter of the body would be invisible, the tension being luminous. These vibrations may be regulated so as to produce various effects or results. If we increase these vibrations sufficiently in this body, it would disappear in vapor. The increased vibrations would separate every atom, or molecule, of matter of the body. They would float off in the air, like dust in the water. This tension holds all matter together. When we can break its lines, then we can liberate all matter.

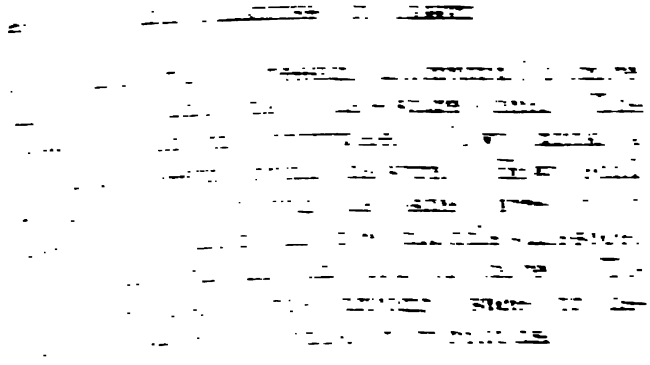
All matter is incased in this tension, and it holds it at rest. When we vibrate it we give it life—for vibrations make heat, and heat displaces the cold, and life is continued.

When we can produce vibrations rapidly enough to act on the tension, then we can have the conducting wire luminous, or incandescent, without heat. These vibrations will be so fine and rapid that they will roll in waves over each other. The conductor being rigid, these vibrations will range from one million to hundreds of millions per second. These vibrations will be as continual as the motion of the earth. They will act directly on the tension lines, making and breaking them at every vibration. They will be in harmony with Nature and Nature's laws.

THE TELEPHONE—ITS USE.

THE telephone is a reproduction of sound by vibrations on the diaphragm or receiver. The diaphragm resists the vibrations, holding or concentrating them. The wire conductor makes a hole in space, and the vibrations are a displacement through the conductor of these vibrations. When we speak into the telephone, this space is filled with the tension of space, the diaphragm reflects these words the same as a mirror reflects our face, but the words are reflected at the end of the conductor—that is, the words are a reproduction of the sound vibrations spoken into the diaphragm. It is the mirror for reflecting words, and the conductor is the tube for the displacement of these vibrations, or sound words. The air around the diaphragm resists the words, or sound, and is vibrated, and it vibrates the tension, and the tension displaces these vibrations, or sound, at the end of the conductor.

Every vibration produced in the diaphragm displaces a vibration of the same quantity at the end of the conductor. These vibrations do not travel; it is a displacement of the quantity applied. This wire tube is incased in the tension,



A TUNING-FORK, AND ITS NATURE.

IT is made of fine steel, in order to be very sensitive to sound and vibrations. This tuning-fork occupies a portion of space. The tension is in, and around, and through its atoms, making it rigid and elastic, capable of bending without breaking. In Nature it was atoms, then heated and melted, combining its atoms. The heat expelled the cold, and it became liquid. The heat then removed, and the cold compressed or forced it into a solid, and combined its atoms. The cold tension is the force that pressed around it in cooling, shrinking it into a smaller space than when in a liquid form, thus making it sensitive and in harmony with the tension of space. The fork is then hammered, and tempered, and finished, and gives out sound by vibrating on the air. The air resists these vibrations, and vibrates the tension in the fork, and the fork resists these vibrations, and transmits them to the air and tension around it, and they transmit it into space.

The tuning-fork is inclosed in the tension, being part and parcel of it, and it can vibrate only through the tension and air. The tension

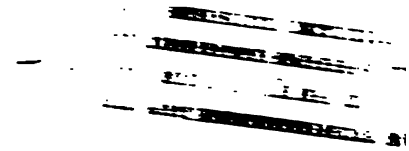
[illegible] conducting, or producing. [illegible] the air resists, and is vibrated and [illegible] carries the sound waves or [illegible].

THE COPPER WIRE AS A CONDUCTOR, OR MAGNETIC CIRCUIT OF ELECTRICITY.

THE wire makes a hole through space, and the quantity applied displaces the same quantity at the other pole, or end of the wire, or conductor.

For every vibration produced by the battery, it displaces a vibration of the same quantity at the other end of the circuit. The tension of space is in, around, and through the wire, to the pressure of ten thousand tons to the square inch. The wire is the dividing line of this great force, and is filled with it. The vibrations act on the pressure in the wire, and displace the quantity applied. The tension is the cold pressure of space, and the wire is filled with it, and the vibrations that we apply are a product of heat. This quantity of heat displaces the same quantity of cold through the conductor.

When the tension in the conductor is vibrated, it is put in motion, and the pressure outside the conductor presses into it, and produces the circuit. When the current is passing through the conductor, the inside of the conductor is all in



THE BRAIN.

THE brain is protected by the skull, Nature being wise in all her works. This brain is a delicate ganglion mass of nerves, coiled in receptacles, and protected from contact with the air. This brain is like a central telegraph station. These wires are distributed all through the city, conducting or carrying messages. Every wire is in communication with some house, and our thoughts are carried on these wires, and our wishes or desires granted. The person at the head of this station is in communication with all these people in these houses, and supplies their wants through these wires. Now, the brain is the central station for communicating with the body. The nerves are the conductors, or wires, for carrying the messages through all parts of this body; and if any of these nerves are out of order, it informs the brain, and the brain, through the muscles of the body, tries to repair these nerves. Every nerve throughout the body is connected with the brain, through the spinal column. The nerves are insulated, or separated, from each other by a liquid, or lubrication. A needle applied to any part of the body could not

find a place without a nerve. Now, the brain has to guard and watch over all these nerves, and keep them in harmony. How could all these delicate nerves act or do any work on themselves? They being a soft mass of matter, they must be incased, or floating in some great force, finer and more sensitive than themselves. Every square inch of this body is acting on a force of more than ten thousand tons. This is the tension or pull between the sun and earth.

This is the great force that the brain acts on. When the brain thinks, it vibrates some of its nerves, and they vibrate the tension within them. This vibrating nerve has acted on and disturbed a force of more than ten thousand tons to the square inch. Now, the brain is continually acting on this force. All the millions of little nerves of each organ of the brain are floating in this force. This tension keeps the brain in equilibrium, it being an equalizer of force; it is not compressible or movable. Vibrations are the only actions that can act on this tension. The vibrations cross its lines and disturb it. These vibrations must be very fine to act on it. The brain thinking, is working. The nerves are exercised and produce heat, and the heat vibrates the tension, and stimulates the brain. A thought is an action, or work done by the brain on the nerves through the tension throughout space.

All these little nerves have different quantities of vibrations, ranging from hundreds to hundreds of millions per second. These ranges of vibrations do not interfere with each other, they travel on their own lines in perfect harmony.

Now, if two brains were in perfect harmony with each other, they could communicate with each other through their brains. Their thoughts would be in harmony with the tension connecting them. They would be like two magnets in perfect circuit. They would be two minds in one. This tension is very sensitive, when a thought can act on it and disturb it.

Why should Nature make a body and brain all of nervous matter, if it did not have some sensitive force to act on? Nature never makes a mistake in her work. Man makes many, for he does not live in harmony with Nature, and he must not blame Nature for his mistakes. We find all animals and insects of a nervous structure. Their nerves are the resistance coils. They act on the tension within them, and vibrate it, and they produce heat and cause the circulation. This circulation is like the magnet, with the additional fluid or blood. Everything that has life must have a circulation. That is what gives them life. Heat and cold are the two active principles of force, life, and motion, and they are the medium for producing the circulation. The

cold enters the body and becomes heated, expands, and is pulled out by the cold. The body is continually making heat, and the heat is continually displacing the cold. As soon as the cold enters the body, it is heated and drawn off by the air. The heat and cold are continually changing places, trying to find their equilibrium, or point of rest, through the body, and the body is continually resisting their efforts, and that keeps up the circulation and life action. The interchange of heat and cold through the body is like the making and breaking of the poles of a magnet. They are disturbing the lines of force. The fluids in circulation through the body retain the heat, making it uniform in the body. The cold outside the body is constantly pressing all around it, trying to find an entrance, and as fast as the heat is generated in the body the cold absorbs it.

THE PRESENT DYNAMO—ITS NATURE.

THE MAGNET—SOFT IRON, ITS NATURE.

IT occupies a certain form in space. It may be solid or made of pieces. Winding the magnet incloses its limbs, as if in a tube or cylinder, the coils being wound close together in cases. The iron, under stress, strain, or tension, if wound cold, and heat be applied to the magnet, it would expand and almost burst the coils. Now, knowing of the tension in space, the magnet being in that tension, holds it at rest, or under normal stress, the same as air pressure. We move through the air and do not feel it, yet it permeates everything on the earth. Now, the tension being uniform through space inside of the magnet and outside, the molecules, or atoms, of the magnet are pressed together to such an extent as to almost exclude the tension within it. This causes a great pressure around every atom of the magnet or iron. This strain is normal at rest, but when vibrated the lines of strain become separated and disturbed. The lines inside of the magnet are in vibration, and the outer lines are pressing against the surface of the mag-

[illegible]

The pressure outside being constant, pressing against the surface of the magnet, the tension inside the magnet being in vibration, gives way to the tension of the outside, and produces the flow, or circuits. Once the coil around the magnet becomes charged or vibratory, it imparts it to the magnet, and sets it in vibration, and these vibrations are the magnetic pull or tension. When *the magnet vibrates, it disturbs the lines of the tension from the outside, thus causing the flow, or circuit.*

THE DYNAMO ARMATURE,

Rotating between the poles of the magnet, makes and breaks the tensions, or magnetic lines. The

copper wire for winding the armature is placed so as to make and break the lines of tension. In rotating, the ends of the wires pass into the commutator bars, connecting them with the brushes, or conductors, for distribution.

Now, let us see what the dynamo is. At rest, it is inert. It is simply a mass of metal—no life, no action, no motion, and no vibrations, simply occupying a portion of space. All the space this machine occupies is filled with the pull or tension of space. The lines pass down through its mass, regardless of material. These lines are like sun lines. Let these sun lines pass through an opening into a dark room; then examine the fineness of these lines. Put a piece of glass through them, and try to break them, and you will have an idea of the lines of tension. This tension passes through everything, as the sun passes through the glass.

The armature occupies a portion of space, and the tension is in that space at rest. The wire incloses the tension within it, thus confining it; and, when rotated, these lines are disturbed, or forced out into the commutator's bars, they being the continuation of these lines. The brushes, or conductors, form a broken circuit through the commutators. Now, this circuit of brushes, in close relation to the commutator bars, disturbs and breaks the lines of tension in the space. The

armature rotation between the poles of the magnet disturbs and agitates the circuit between them. Now, all this space that the armature and commutators occupy are in rotation, disturbing the tension inside and outside. All the space is thrown out of equilibrium by the mass in motion. The tension in the wire of the armature is disturbed, and heat is generated, and circulation produced. This circulation passes out into the commutators, and the commutators, rotating between the conductors or circuit, disturb these lines, and electricity is the result of the disturbances or vibrations—for all this motion is vibratory. The molecules of air inclose the tension within them, and when they are disturbed, they vibrate the tension inside and outside. This causes great commotion in this space; for the molecules of air are seeking an equilibrium, or point of rest, but the armature rotating will not let them rest. The conductors in circuit are disturbed by the commutators rotating between them. This is where space is thrown out of equilibrium, and this action is imparted to all the space the wire of the circuit occupies.

The disturbances by the armature and commutator rotating between the poles of the magnet, are equalized through the conductors, or brushes. This disturbance is seeking an equilibrium, or point of rest, but this it cannot find

—for the rotating mass breaks the equilibrium of this space, producing, or causing, a partial vacuum on one side and a pressure on the other; and they try to become equalized, and this keeps up the battle, and the struggle goes on. The wire in circuit is a hole in space, and these pressures seek an equilibrium through this hole, or tube; and if we break this circuit, we destroy the effect. But if we connect this circuit to some iron, or magnet, it will find an equilibrium in it. That is, the space that the armature's commutators occupy is disturbed and thrown out of equilibrium, and it tries to find and equalize this disturbance through the conductors. This is similar to placing two barrels on a level, and connecting them with iron pipes, filling one barrel with water. This will become equalized in the other; and if we still connect another barrel in the same way, the water will flow through the pipes, and the three barrels will contain about the same quantity. They have found their equilibrium, or point of rest; and if we continue supplying the first barrel with water, it will flow into the other two until they are filled. The water travels, or moves, through the pipes; but electricity does not travel. Everything is filled with it; and when it is disturbed, or vibrated, in circuit, it finds its equilibrium at the point of disturbance. This point is where

the circuit is broken or open. We will fill two barrels with water, connecting them with an iron pipe. In the center of the pipe we have a union. The pipes are connected to the bottoms of the barrels. We procure a corrugated hollow cylinder, with bearings and pulleys, ready to connect to the engine. We disconnect the pipe in the center, and fit them into the face of the cylinder. Now, these pipes will fit close against the corrugations, and as the cylinder moves, the recessed corrugations will allow the water to flow out, and the raised corrugations will close, or shut off, the water, acting as a valve.

Now, this cylinder in the center of the circuit cuts it off, breaking it. We will start the engine, and put the cylinder in motion, and watch the result. The two barrels supply the pressure, through the pipes, to the face of the cylinder, and the cylinder resists their pressure; and as the cylinder revolves, it disturbs the circulation, or flow, of the water, continually making and breaking the flow through the pipes. The water in the barrels and pipes, as the cylinder rotates, is in motion, or momentum, and this momentum is suddenly arrested. The barrels feel the shock, and the cylinder feels the shock, and these shocks are continuous. All the weight of water in the barrels is acting against the cylinder, and the

cylinder is disturbing the circuit of the water. The water is seeking an equilibrium, or a point of rest, but the cylinder will not allow the water to rest.

Now, if these barrels were separated for several miles, the pipes would contain a great weight of water, and if this weight was arrested of its momentum ten thousand times in a minute, it would represent a great force, or power. The water being arrested of its momentum suddenly, would be solid and as rigid as steel, and would pound against the cylinder and barrels with great force; but if these pipes contained ten thousand tons to the square inch, how could they be kept open or closed? What cylinder could resist the pressure?

Let these barrels represent the earth and sun, and the pipe one square inch of space from the sun to the earth; this would have to sustain about ten thousand tons. Now, could our pipes hold this pressure, and could our cylinder resist, or make and break, this circuit? And if it could, we would be acting on and disturbing more than ten thousand tons to the square inch; and if we disturbed this weight ten thousand times a minute, the earth, and sun, and pipe, would feel the shock at the same instant, for this pipe would be as rigid as steel, and anything that would disturb the equilibrium of the pipe, would dis-

turb the equilibrium of the sun and earth, for the pipe would be in connection with the two bodies. This is equal to the tension of space.

POWER OF MIND OVER MIND, OR AN ACTIVE OR STRONG BRAIN OVER A WEAK BRAIN.

THE active brain is vibrating on the tension. Its nerves are tough and muscular from exercise by thought and study. These nerves are vibrating on the tension more than ten thousand tons to the square inch, and as these nerves are weaker or stronger, so will they be able to act on, or utilize, this force. The weak brain's nerves are soft and delicate, for the want of exercise, and are subject to impressions; it not having confidence in itself, and not being able to utilize this force as the stronger brain does.

Now, these two brains are acting on the same force, disturbing it; but the strong brain acts on and disturbs this force more, and oftener, than the weak brain. Now, the weak brain cannot compete with the strong brain. It is too powerful for it, and it must submit, or give way, to the stronger force. Now, the active brain has subdued the weaker, and has control over it, and can command it at will of mind to obey this will, and the weaker brain cannot resist this will, or command, for it has no will of its own. The

strong brain having conquered the weaker, the weaker becomes a slave to the stronger. This is like trying to make a weak man do as much work as a stronger one. The man that is in the habit of working at muscular work will not get tired, for his muscular system is used to it; and if a weak, delicate man, who is not used to hard work, is put alongside of this strong man, he will soon subdue him. Muscles subdue muscles, and mind subdues mind. The strong man has subdued the weak one, like the strong brain conquering the weaker one. Now, this strong brain has control over the weak one, and can influence and control its thoughts, for the two brains are in circuit through the tension, and their thoughts can be imparted to each other. The stronger having the weaker under its influence, it can know what it is thinking of, and can compel it to think as it does. This is mental work, or exercise of the nerves of the brain. The more the brain is used, the stronger and larger the nerves become. This is the same as the muscles of the body. If we do not use or exercise our muscles, they will become soft and flabby, and the more we use them the stronger and tougher they become, and the less difficult it is to do the work in their lines, once they have become used to this work. But once the strong brain gets the weaker under its control, the latter cannot resist

its influence. These two brains are acting on the same force. They are united in it, and cannot get out of it, and the strong brain wills the weak one to do or think something. The weak cannot resist this will, for the weaker has no will only as the stronger wills or commands it. These two brains and bodies have grown up on this tension, or force. They are all a nervous matter in this tension, and the larger and more active these nerves are the more they can act on and disturb this force. This disturbance is seeking an equilibrium, or point of rest, but the strong brain will not let it rest, and it seeks rest in the weaker brain, for it cannot resist this force that is forced into it, and it gives way to the greater force. This forms the circuit and equilibrium, for the weaker offers no resistance to the stronger.

This will explain all the phenomena of mind-reading, hypnotism, theosophy, and all phenomena in regard to mind over mind, and mind over matter. The nerves of the brain are what we call matter. This matter is acting on mind. This mind means all the universe—illimitable space with all the planetary system throughout that space. Mind is that vast, endless space, and when the brain thinks it disturbs all that space, for all that space is solid and beyond our comprehension, and all matter is a condensation in

this solid tension, for we cannot find any matter that this solid tension cannot crush or vaporize, when sufficient heat or cold is applied to it.

WHAT IS MESMERISM AND ITS CAUSE? —A WEAK AND A STRONG BRAIN.

THE strong brain wills the weaker one to do something. It must obey this will, or command, for it has no will of its own. Now, the strong brain wills the weaker to close its eyes and answer all the questions that the stronger brain may choose to ask. The organs in the weak brain have no power or control over themselves. They are obeying the will of the strong brain, and they cannot resist this will.

The organs in the strong brain are under great strain, for all their nerves are in the tension and vibrating rapidly, exerting great force. This force is equalized in the weak brain, subduing it. This forms a circuit, or circulation, between the two brains, and the force exerted in the strong brain finds its equilibrium in the weaker brain. This relieves the strong brain of its over-work, or exertion, and the weak brain is a receptacle for this over-work, and this is the over-work that is propelling the weak brain, and it must obey this force.

Now, the body is moving in a pressure of ten thousand tons to the square inch, but there is no

resistance to the motion of the body through this force. The body is like a shadow moving through the tension. The heat inside the body is about ninety-six degrees above zero, and the temperature around the body is about sixty. These two conditions are pressing against each other. They are trying to become equalized. They are seeking a point of rest, but the heat in the body will not let the cold around it rest. This is what keeps up the circulation of heat and cold through the body. This keeps the tension in the body in vibration, and the matter resists these vibrations, and heat is generated. This heat expands all the fluids, keeping up the circulation of the blood. The circulation of the blood is like the circulation of the magnet. It is an interchange of heat and cold through the tension. This body is standing in a force of ten thousand tons to the square inch. This is a uniform pressure through this body, but the inside of the body is all in vibration, disturbing the equilibrium of this space, and the pressure on the outside is constantly pressing against this vibrating body, keeping up the life of this body. This will apply to everything that has life or form, for everything that has form must have heat, and heat gives life to everything. As long as the body can maintain this heat, it can continue life, for this heat keeps the tension in

vibration, disturbing the space within this body, imparting life to it; but when the vibrations cease, death ensues. The body ceases to breathe, and the cold tension around the body takes possession of it, and it is rigid and at rest. The cold has found its equilibrium and point of rest in the body, and there is no more action, circulation, or life.

Now, this body came from seeds, and these seeds combined, and a body grew from them. These seeds gradually expanded, occupying more space, maturing and developing into a body. This was Nature's way of building up a body. Everything must grow up in the tension. Nothing can get into this tension only by growing up in it. This growth does not add anything to the earth mass. It is only a condensed matter of the gases that are now on the earth. These gases cannot be added to or diminished. They are indestructible, and circulate through the earth and air, and all bodies grow from these gases by condensation. This is the earth's circulation. Now, these gases feed all animal and vegetable life. They grow up and decay, forming a gas. This gas mixes with the air, and all other gases, and is condensed into rain, and falls on the earth to build up more bodies. This is Nature's simple circulation. This body, in the process of growth and maturity, filled no space in this tension. It

was only a condensation of gases. All these gases are divided into atoms. So the body is built up of atoms. Now, these atoms are indestructible and everlasting, and this body grew up in this tension, imprisoned in it, and it cannot get out of it as long as it has form or action; but as soon as the body ceases action the change begins. The body now offers a resistance to the circulation of the tension, and heat is generated in its mass, for the body is now one mass of inert matter. All this matter is the atoms. These atoms cannot liberate themselves in this cold condition, but the matter begins to ferment. This is heat, and this heat liberates all the atoms, forming a gas. Now, the body, or atoms, has got out of the tension through the gas, but the form remains where the body was. They are now separated from the tension.

Now, the body grew up from atoms, or gas. These atoms consolidated and formed the body. All these atoms have life and circulation, and are condensed into the body, and the body can separate these atoms, or get out of the tension, only by going back into the condition it came from into atoms. The tension in the body can be made larger or smaller only by heat or cold; but as the gases are liberated by the heat generated by the fermentation, they mix with the air, and are carried up into the cold-air

space and condensed into the rain to fertilize the soil of the earth. The gases that have evaporated from this body have not disturbed or destroyed the tension that the body occupied. The gases left the tension intact. It cannot be moved only by the body that occupies and that has the use of it as long as it can act on or utilize it. Now, all these atoms that formed this body were in the tension, part and parcel of it, but having a form. These atoms were of different families, that is, different gases; and these gases combined to build a body. These atoms were not made, they have always existed, and they condense into other bodies, but not in a mass. They are separated by the air, and circulate through it, and are deposited on the earth and produce vegetation, and the animal feeds on this vegetation, maintaining life and motion. Now, this vegetation is the atoms, or gases condensed into them, and the animal feeding on this vegetation, or gases, condenses them into the animal, and the bodies grow up and mature on them. Now, the body is composed of atoms and the tension.

The atoms are heat, and the tension is the one and only force filling all space and matter. So the matter of the body is heat, and the tension is cold. These two giants are continually fighting for the place, and this fighting is what gives life to all bodies. This is a mutual fight to produce

life. It is not as man may fight. It is Nature's fight to maintain life. We find the body is heat. This heat has to resist, or fight, the cold tension of space. This action, continued, maintains life in all matter, for all matter has heat and life in it.

WHAT TAKES PLACE IN A BODY AFTER DEATH?

THIS body is what we call matter. This matter is condensed gases, or atoms. These atoms, or gases, can separate and dissolve out of this body, or the space it occupied. The tension is in this body at rest. This is the space the body occupied. This body gradually dissolves into gas, going back into what it came from. This dissolution does not disturb the tension of this body, for it grew up in it, and can get out of it only by evaporation, or separation of the gases, or atoms.

Now, the matter of this body does not rot or decay, going into nothing. This decay is a purification by fermentation, liberating all the gases, giving them freedom to go off and condense into some other body or matter. All these gases mix with the air, and become purified and condensed into rain, and fall on the earth, to build up more matter and bodies. These gases cannot be destroyed, or burned up. They are indestructible, like all other matter or gases.

Now, these gases consolidated, and a body grew from them. This body had life and mo-

tion, for these gases formed a body, and this body was the tension, part and parcel of it, giving it life and motion, but the gases condensed into this body, giving it form. This form held the tension within it, and the form resisted the circulation of this tension, and life is produced in it. Now, we cannot understand how this body was made, for we find that all the matter or material that this body is composed of has existed, and there is nothing made, or nothing destroyed. This is Nature's simple circulation. All the resources for building up bodies, or matter, are here existing, and everything must grow up from this by condensation. This condensation is a slow work of Nature, and is accomplished by depositing atom by atom, to build up the body, or matter, in process of growth. Nature is never in a hurry. She can afford to take her time, for she does her work well and never makes a mistake. Can Man say as much? Now, we find that a body cannot be made, or formed, only by condensation of the gases of the earth, and these gases are indestructible and everlasting, as the tension that fills all space and matter; and we find that nothing can be made, generated, or produced, for everything is finished, and cannot be destroyed. We simply act on or utilize the conditions. We did not make, generate, or produce. Nature left none of her work

unfinished, and she did this work well, with wisdom, intelligence, and reason. Man is the only being that criticises this work of Nature.

THE SUN'S HEAT.

WE say that the sun rises in the east and sets in the west; but we know it does not rise or set. Its light is permanent; but the earth, revolving in space, is continually offering a different portion of its surface to the sun. This surface is in direct line with the sun, and is the part acted on through the lines of tension. These lines must be vertical to cause light and heat, for we see in summer the sun directly over our heads. This is the time we are directly in these lines, and offer a resistance to them, and we feel the great heat, and say it comes from the sun. The earth is pulling from the sun, and we are in that pull, offering a resistance to it, and heat is the result, and all the air around us offers a resistance to that pull and is heated, and it heats the tension and sets it in vibration. Now, this tension is all around us, and is a pressure of more than ten thousand tons to the square inch, and this is all disturbed and thrown out of equilibrium by this heat, and this space is trying to find its equilibrium; but the vibrating tension caused by the heat will not let this disturbed space rest, and we are in this disturbed space, offering a resistance

to it, and its free action and circulation, and we feel the heat, but this heat is from the disturbed space around us, not from the sun; and we see the heat ascending from the earth, not descending from the sun. Now, if the heat came from the sun, it would press down against the earth with great force, and the heat of the earth could not ascend. It would be forced back against the earth, and would consume it, for heat expands and presses everything from it. This is what we call repulsion. This would repel the earth, forcing it away from the sun. Now, two heated bodies could not pull each other together and maintain their heat. There could be no circulation through these bodies of heat and cold. They would soon become exhausted, and lose their heat, form, and life, and disappear in space. Nature does her work well and intelligently, with reason and wisdom, and never makes a mistake. It matters not how we may interpret her work—it does not alter it. Now, every atom has intelligence, wisdom, and reason beyond man's conception, and how could the sun and earth, built up of these intelligent atoms, do an unintelligent or unreasonable thing, or break a universal and intelligent law that gives them life? Now, we find all bodies, from the atom to the earth, maintaining their own heat within their own bodies, for all these bodies are moving and float-

ing in this universal mind and tension, supplying all these bodies with all the necessaries to maintain their life and motion.

This mind that these bodies are moving in is all the universe, illimitable space, with all the planetary system throughout that endless space. This is all wisdom, reason, and intelligence combined in mind and force, or force in mind; and how could this wise law that rules all this vast universe, keeping everything in harmony and imparting life to it, make a law to destroy itself or any of its families? It is not reasonable to assume this, and all Nature's laws and phenomena are reasonable, and comprehensible, and easily understood, and no secrets or mysteries in them?

The secrets and mysteries are in man, not in the matter composing man, not in the law that gives him life and motion. These mysteries of man are for his own selfish purpose of gain, or control of the weak and ignorant, making slaves of them. Now, if the heat came from the sun, it would cover the whole earth. It would be forced all around it, and there would be no cold places in it, and there would be no cold places on the earth, for this heat would press into every recess in the earth, from the north to the south pole, for this heat coming from the sun would be constant, and as the earth would revolve towards

the east, the western portion of the earth and air would be masses of intense heat, for this heat forced against the earth would seek an equilibrium all over the earth, for the air would form this equilibrium. Our nights would be nights of intense heat, for the heat forced from the sun on to the earth would press around and upon the night side of the earth, keeping the earth in perpetual heat. This would be a very uncomfortable condition for the inhabitants, or the matter composing the earth. This would not be a wise law; but it is not Nature's law—it is man's. Let us look at Nature's way of causing heat. The earth pulls from the sun, the matter resists this pull, and heat is the result. This heat is only in the lines of pull, and only in the air so acted on. This heat is pulled from the earth, for the earth resists the circulation of the tension, and heat and light are the result, and there is nothing consumed to cause this heat and light. As this heat is pulled up it expands the air and vibrates the tension, and the tension vibrates the air. One resists the other, and heat, light, and circulation is the result. This circulation is what causes the heat and light; but this is not made, generated, or produced. It is simply disturbed by the circulation of the air, causing heat and light, and as this heat ascends it carries the moisture and gases from the earth up

into the clouds, and condenses them into rain, to fall back on the earth again. This is the earth's circulation, and the life of everything on it. Now, if the heat came from the sun, the heat of the earth could not ascend against an intense heat. One would repel the other, and there could be no circulation or life on the earth; but now the heat caused on the earth ascends, and the cold air comes down to fill its place, thus forming a circulation and interchange of heat and cold, vibrating the tension and causing heat and light. This is all harmonious and reciprocal, consuming, destroying, or wasting nothing.

Now, it is reasonable to assume that the same action is taking place in the sun, with its vast atmosphere, making it brilliant with light and heat, consuming, or wasting, nothing.

This heat in the sun is caused the same as our earth, and is not radiated or wasted into space. All bodies, or matter, hold the tension within them, and when this tension is vibrated it causes heat in this matter, for this matter is a continuation of the whole universe, and is connected with it, and part of it, and nothing can have form without heat, for all matter is condensed heat. The cold condensed this heat into its present form, holding it in this condition until it is liberated again, and if we vibrate this condensed matter rapidly enough it will cause heat

again, for the vibrations disturb the equilibrium of the tension that holds this matter in its solid form, and the matter resists these vibrations, and heat is the result; and if we continue these vibrations this matter will become vapor or gas, for this matter was occupying the space belonging to the cold tension of space. The vibrations separated all the atoms of the matter, for they could not hold together in this vibrating tension. The pressure in the disturbed space is more than ten thousand tons to the square inch, and all these atoms are condensed into this pressure, and they were quiet and at rest, and the pressure was uniform all around and through these atoms, holding them together; but the vibrations disturbed this pressure, throwing it out of equilibrium. This caused the pressure on the outside of this matter to press in against the vibrating space, crushing and vaporizing this matter. The matter was the resisting medium. It resisted the vibrating tension, and was separated into atoms, or gas. This gas was the original form of this matter. This pressure does not consume or destroy any of these atoms. They are simply set free to condense into some other bodies, or matter.

And we find that all heat, light, and its phenomena, are the result of the tension of space in combination with matter. When this tension

density or mass, and moves in accordance to this density, or mass. This is its mode of motion, or equilibrium. It is seeking a point of rest. The heat caused within it by its resistance will not allow it to rest, and it continues in motion. The earth pulls from the sun, trying to get loose, but the sun holds on to the earth, and swings it around in its circuit, causing heat and light by its resistance to this pull. This is the sun's circulation through the earth, causing its heat, light, and life. We say this tension is solid, because it cannot be divided. It divides all matter, and no matter can divide it, for we find that all matter can be divided into atoms or gas. This is the tension that divides this matter into this gas, for this matter was gas condensed into this tension, holding it in this form at rest. Nothing can exist in a solid form but the universal tension—mind and force combined in one. We can call this either mind or force, and if we could produce a piece of steel six feet square, and if this steel could be brought into this universe from some other universe, this steel would be encroaching on the space belonging to this universe, and there would be no room for it, and it would have to resist more than ten thousand tons to the square inch of its surface. This pressure would press all around this steel, crushing it into heat. This would be vapor, or gas. The tension would con-

life. We cannot think of or on nothing. It is not a thing. It must be something, for there is something everywhere, and that something is the tension, force, or mind, filling all space and matter in a uniform pressure, and in equilibrium, for it equalizes all actions and pressures, causing harmony throughout the universe.

The storms, cyclones, thunder and lightning, and all air disturbances, are caused by this tension, for all this disturbance causes heat, and the heat vibrates this tension, and the air resists, causing heat. This heat is seeking an equilibrium, or a point of rest, but the heat will not let the air rest, and it keeps in motion. These disturbances are not fighting or quarreling in themselves; they are trying to equalize the different conditions of heat caused by these disturbances, and trying to keep harmony between these elements in motion.

The air is the great equalizing medium in motion, moving through the tension, causing heat, and carrying this heat with it, distributing it where it is most needed. This motion of the air is causing light, heat, circulation, and motion, thus performing many kinds of work to keep up the life of the earth. All actions in the phenomena of Nature are reciprocal and harmonious, and are necessary to its welfare.

Nature is working and taking care of the earth

to do her work well. Now, all the metallic gases that this heat around the earth would cause would seek their own families, being of the same densities and ranges of vibrations. They would concentrate themselves together to form a solid again; and as these atoms of these gases would condense together, they would unite and embrace each other, and cling together, for they would be of the same range of vibrations, and united by the tension of space, and in all this change from a solid to a gas, and from a gas to a solid, there would be nothing lost or consumed. It would all come back to build up another earth by condensation of these gases. Now, the matter composing the earth is gases compressed into the tension, to make what we call a solid, but this solid is divisible, and fills no space in this tension, and divides or separates none of its lines, and when this solid tension with this concentrated gas matter is vibrated rapidly enough, heat is caused. This heat is the gas resisting the vibrations in this tension. This separates these gases, for they cannot hold together, and if these gases were not in this space there would be no resistance, and there could be no heat. Now, all gases and matter are condensed heat, and this heat resists the cold, and the cold resists the heat. This is the battle for life and place to maintain life.

WHAT IS ENERGY?—COAL, WATER, STEAM, TENSION.

THE coal occupies a portion of space, and the tension is in that space at rest. This coal is condensed or concentrated gas into this solid tension. We will place this coal in a furnace, in combination with a steam boiler. This boiler contains water, and this coal, water, boiler, and furnace are in equilibrium and at rest, and we apply a flame to this coal and ignite it. Now, this flame was caused by the friction or vibrations in the match. This disturbed the tension in this match, causing heat, and the heat vibrated the tension, and the match resisted these vibrations, causing heat and light. This threw this space that the match occupied out of equilibrium, and it became equalized in contact with the coal, and as the heat increases the vibrations increase, and the matter composing the coal resists, and heat and light are the result of this disturbance in this coal, for the tension in this coal is the light and heat from the resistance of this gas composing this coal. The vibrations are so rapid that the tension becomes luminous, and shines, and all the atoms of gas hold the tension

within them. The air circulates through this gas and flame, dividing and mixing with them. This causes a rapid expansion and circulation, disturbing all this space in this furnace, and this disturbance seeks its equilibrium in the boiler, and the water resists the vibrations imparted from the coal, causing heat, and the vibrations increase, and the water is vaporized. The furnace and boiler are in circuit, and the disturbance is equalized between them. The matter of the coal resisted the vibrations of the tension, causing heat, and they have found their equilibrium in their union; and all this space that this furnace and boiler occupy is thrown out of equilibrium, for the tension in this space is all in vibration, and cannot rest, and this disturbed space finds its equilibrium in the cylinder of the engine in the form of steam. The piston and head resist each other, the steam expands, and the head resists and will not move; but the piston is less resistant, and gives away to the heat, expansion, or disturbed tension, or energy. Now, every molecule of water or steam holds its tension within it, and this is under strain from the heat and expansion. This wants to become equalized, but the cylinder confines and holds this exertion, expansion, or energy, and will not allow it to become equalized until it overcomes the resistance, and causes motion; then it finds

its equilibrium and point of rest in condensation into its original form of water. The coal, boiler, water, and engine were in circuit, and found their equilibrium in themselves through the tension that unites and holds them in form and place.

Now, all the space that this coal, water, boiler, and cylinder occupied was the tension of space, and this matter composing this mass was only condensed gases in this solid tension, and when they were disturbed they found their equilibrium in each other in circuit or contact. This was only the matter resisting the tension in this disturbed space. It matters not how this tension may be disturbed, heat will be the result, and this heat is expansion or energy. It has overcome the inertia of the cold tension of space, disturbing its rest and giving motion or movement to matter.

Now, the energy or force exerted by the steam was the tension thrown out of equilibrium by the heat; and as this heat is continued, the energy is exerted, and is equalized in the work done. The water resisted the action and vibrations of the tension, and was crushed into heat or vapor. This is expansion, causing motion, overcoming the resistance or inertia. The atoms of the coal expanded, from the pressure of the vibrating tension. These expanding atoms were trying to

fill more space in this tension, and it resisted them, and force was exerted, and the atoms or matter were crushed into heat or gas, and this was absorbed or equalized in the water of the boiler, causing the same effect in it. These pressures seek their equilibrium, and find it in the cylinder of the engine, in the form of steam. This steam is the crushed and vaporized water. All the space in this cylinder is the tension; and it is all in intense vibration from the heat, and these vibrations divide and separate the water into vapor or gas. The steam, or water, wants to rest, but the vibrations crush this steam into heat, and will not let it rest, and the energy or force is continued and exerted between the two opposing actions, heat and cold.

Now, we find that energy or force is the disturbed cold tension of space. The force is the inert cold tension resisting the heat. This resistance between heat and cold crushes the opposing matter into gas, expanding it, filling more space, exerting energy or force, and everything that has form, has matter and heat in it; for all matter is condensed heat into this solid tension, and when this tension in this matter is vibrated, the matter resists, and heat is the result. This heat expands this matter, trying to fill more space; but all space is full, and there is no more room for any more matter, and this expanding

matter is pressing against more than ten thousand tons to the square inch of this space. This is what crushes this matter into heat or vapor. This vapor is heat, and seeks an equilibrium or a point of rest, and ascends into the clouds, and condenses into rain or snow, and finds its equilibrium. The heat vaporized the matter, and the cold condensed it. The heat raises the matter into the clouds, and the cold presses this condensed heat back again to the earth, the point of rest. This is the earth's circulation, or circuit of heat and cold. The heat ascends, and the cold descends, thus forming a circulation and equilibrium. The heat raised or lifted the weight of cold, by liberating its gases, forcing them up into the cold space, and they become weight again. They now resist the circulation of the earth, and are pressed on to it, the earth being the point of rest, but the earth's circulation still continues through all matter.

WHAT IS THE STORAGE BATTERY, AND WHAT DO WE STORE?

THE battery occupies a portion of space, and the tension is in that space, in equilibrium and at rest. The dynamo occupies a portion of space, and the tension is in that space, at rest. There is no energy in either dynamo or battery. They are quiet and at rest. The battery is connected to the dynamo, and we start the engine and dynamo. The energy of the engine is imparted to the dynamo, and is put in motion. The armature is rotating in space between magnets. This rotating mass disturbs the equilibrium in this space, and this disturbed space seeks its equilibrium in the battery, through the wires or conductors from the commutator into the brushes. The battery is in the circuit, and the armature and commutators, rotating between the brushes, disturb this circuit, and this disturbance wants to become equalized, and the conductors are the tubes for equalizing this disturbance. This is similar to a balance.

Nature's force seeks a balance through all matter and bodies. The armature is rotating and disturbing this space of ten thousand tons to the

square inch, and the faster it revolves the more it disturbs and acts on this force, the more force it exerts, and this exerted force is equalized in the battery. We say this is stored. This is the energy of the coal imparted to the water into steam and through the dynamo into the battery. This is all the energy of the heat, or expansion, stored in the battery. This can cause more expansion, or heat, when liberated.

The more surface this battery contains, the more energy it can store, or hold. This energy has not been forced or pressed into this battery. It has been equalized through the dynamos. Nature's force seeks an equilibrium through all matter. Now, the heat of the coal imparted to the water caused steam. The steam propelled the engine and dynamo. This was all equalized in the battery, for they were all in circuit, and seeking an equilibrium, or a point of rest; but the heat would not let all this mass in motion rest. If we place one, two, three, four, or five steam boilers in series, or circuit, connecting them all with pipes, the pressure will be equal in all the boilers, no matter what their size may be. This is the equalization of the pressure, or conditions, in the boilers. They seek an equilibrium, or a point of rest, and they all rest against each other, and the one that has the largest surface will contain the most steam, or stored energy. This is

similar to the storage battery. Every square inch of surface in the battery retains an equal proportion of the disturbed space in the dynamo. For every inch of disturbance in the dynamo, an inch is disturbed to the same extent in the storage battery. This disturbance is heat, and is imparted to the plates in the battery as energy, or the equalization of the force exerted by the dynamo; for the battery is in the circuit, and offers a resistance to the free circulation, and heat is the result of this resistance, and any matter, or material, that we may place in this circuit will resist, and heat will be the result. This heat is not made, generated, or produced; the conditions for causing heat are everywhere. When we disturb the equilibrium of any matter or body, we cause heat; for then we disturb the tension of space. The universal force fills all space and matter, and anything that can disturb this will cause heat in this disturbed place; and if this disturbed place had a circuit around the world, it would be all disturbed to the same extent. And if this circuit encircled the great universe, it would be disturbed; for what disturbs one disturbs all when they are in circuit, and so they are all in circuit, solidly connected, no space between all this vast universe. They find their equilibrium in each other. The energy exerted in the sun is equalized through its system

escaping, and resisting the pressure, confining the steam within them. The worlds are revolving in the cold tension of space. This cold presses in against the matter, holding it in form, preventing the heat from escaping; and the heat presses out against the cold, forming an equilibrium and balance. This holds this matter in form, and it cannot get out of this pressure; and this matter resists the circulation of the tension, and heat is the result, and this heat is equalized through the systems, giving them life and motion. This motion is reciprocal and harmonious. These systems have intelligence and reason, for they are moving in an intelligent force, governed by an intelligent and wise, universal mind. How could any of these worlds be lost, or destroyed, or how could they consume each other, or come in contact, all moving in their own circuit in perfect harmony? This is more than man can say for himself. If the human race was as harmonious and as reasonable as these worlds, or systems, there would be no discontentment, quarreling, and fighting between them. These worlds, or systems, are not jealous if one has more surface and heat than another. They do not try to take this surplus away from this larger world. They are all satisfied and contented with what they have got, for they are obeying a wise law, and are satisfied with what this law allows them;

way into this cold tension. This heat must be able to expand and press against this cold. This is what gives form to this heat, or matter, for this cold crushes against this heat, condensing it into matter and form, and the more this matter is crushed, the more heat is caused. This is why all atoms and planets are spherical. This is the only form that can resist the pressure of the cold tension. The pressure is equal all around these spheres, holding them in this form. They are all molded, or impressed, into this cold tension, and cannot get out of it, or change their form; but can consolidate into masses, and unite, and form what we call a solid. These masses must be of the same families, in order to harmonize and combine to build up this solid. These atoms composing this solid have not been made, generated, or produced. They are one of the constituent parts of this universe, and are indestructible and everlasting, and are a continuation of one, and all, and part of the whole.

Now, an atom is an individual world, having all the properties for building all matter and all worlds, and these little atoms are the only things that can resist the great pressure of the cold tension of space. They are moulded into this, the same as we mould a piece of iron or metal into the sand or clay. The sand or clay is like the cold tension; it holds the fluid metal, imparting

form to it. The metal cannot get out of the mould until it gets its form. Now, it was the cold sand that imparted form and shape to this metal, and without this mould we could not give the desired form to this metal. We see the sand around the moulded metal, but we cannot see the cold tension of space that holds this metal in its solid form, giving and holding everything in its present form. This is the great universal moulder of all bodies and forms, and man is moulded in this mould, and he moulds forms to please himself; but all these forms are held in form by the one universal mould. And how can these forms be changed without a new mould? Man may make moulds and forms, but cannot impart life or motion to them. All living forms have been moulded, and have their form and mould, and these cannot be changed into some other forms and mould. The form once moulded into this universal mould is a fixture in it, and it is part and parcel of it, and is a continuation of the whole universe, without beginning or end.

How could any new form get into this universe that is not in it? Where would it come from? All forms may be changed by cultivation and intermixing; but these are not new forms. They are a mixture of the forms that have been moulded in Nature's mould. Now, there has to be a mould and a form to produce a form. The

female is the mould, and the male is the form. The male is an impression of its form, impressed into the female, and is moulded in this mould, it being part and parcel of these two forms in Nature's mould, and they impart this, their form, to build up another form through Nature's mould. This is a continuation of the mould and form through Nature's mould.

Now, everything must be moulded in this way; for there must be a mould if there is a form, and all forms are moulded into the cold tension of space. This gives form to all matter and bodies. All the worlds and planets are moulded and impressed into this great universal mould, and they cannot get out of it; for they are part and parcel of it, and are incased in it, and move through it.

Now, all the gases have their forms and moulds, and these gases can condense and mix together, causing an admixture of forms. This is when these gases are free to act for themselves. This admixture of gases may cause many varieties and variations in their combination or condensations; but the gases composing these varieties are not made, generated, or produced. They are one of the constituent parts of this universe, and cannot be destroyed. Now, everything grows from the gases condensed into this tension of space. And how could this thing be consumed

or destroyed? This thing is indestructible; but the gases composing this thing can be liberated and set free, and condensed into some other thing. This is Nature's continuous circulation and interchange of place, keeping up the life of these gases. Now, if these gases remained inert, without motion or circulation, there could be no more life in these gases; and everything is built up from these gases, depending on them for life and motion. Nature's law is wisdom and reason.

Now, all bodies grow up from these gases by condensation, or concentration, and combination. These condensed gases deposit on the surface of the earth, and are absorbed into it by its circulation of heat and cold. The different gases are retained in the soil where this particular gas is needed, this place being a vacuum of this gas. This equalizes the gases, and if this place is charged, or has an equal portion, there will be no more deposited until all the surrounding soil is supplied uniformly; for these gases have their own families and ranges of vibrations, and travel on their own lines, and deposit themselves where they are needed. But sometimes there are large masses of decaying vegetable matter concentrated, and these masses, in the process of decay, deposit, or condense, large quantities of a particular gas. This will cause a particular growth where it is deposited. This will be peculiar to

this gas, and the more this is mixed with other gases the more difficult it will be to identify it. The growths of these gases are the lowest form of vegetable life, forming the fungi and mosses. This is the beginning of the fern into the tree and all the vegetable kingdom. The more these gases of a kind associate, the more they become individualized in their products. These products are the gases in a concentrated form, and this form is moulded into the universal mould, and becomes a species of a distinct form, and this new species can cause species of its kind by reproduction. This is Nature's universal circulation of concentrating and liberating her gases. Now, it is reasonable to assume that animal life began the same as the vegetable life, for there is but one law.

WHAT IS THE AURORA BOREALIS; AND ITS CAUSE?

LET us take our minds into the North Pole, and see what the condition is in the air, land, and water. We find it is very cold, say twenty degrees below zero, and getting colder as we go farther north. The air is intensely dry and piercing, the cold penetrating our bodies like needles, and we find everything is frozen rigidly. The ice, air, and land appear to be solidly connected by this cold place; and as the air moves, from some disturbance, it gives out great sound, for we can hear our voices for miles apart. The air is dry and in tension, and offers little resistance to sound. Now, all the land, water, and ice are solidly connected by this cold tension that fills all space, and there is no heat here to insulate, or separate, this union. This is in great strain, from this cold, shrinking action; and we find the ice and snow reflect their light upwards in waves, and these waves of light are disturbed by the moving air, increasing the luminosity, or light. This air is dry and gritty, and grinds together in motion; for there is no moisture to lubricate it. This grinding of the

air vibrates the tension, and causes the light, and this light reflects on to the ice and snow, and is reflected into space. Every molecule of air is incased in the tension, and, when put in motion, the molecules rub and grind against each other, and vibrate and disturb this tension, causing luminosity, and these molecules reflect their light on to each other, and the tension conducts this light into space, and the different currents of air, moving in different directions, agitate and increase this light, giving it the appearance of flashes, similar to flashes of lightning. But this is cold light, caused by cold radiation into cold tension. There is no heat caused in this radiation of light, for there is no expansion of matter. It is a shrinkage. This shrinkage light is without heat. There is no action here to cause heat. It is a vacuum of heat, but can cause light. Now, sometimes the temperature will vary, and the ice will be, say zero, and the cold will suddenly change to perhaps thirty degrees below zero. Now, the air is thirty degrees below the temperature of the ice. This makes the ice heated in comparison to the air. They want to become equalized. This causes a great agitation in the ice and air. This is imparted to the tension of space. The air, resisting, causes friction and luminosity. This causes a circulation through the ice and tension; the air, resisting,

becomes luminous, and flashes this up into the tension, and is flashed back into the ice, thus forming a circulation, or equilibrium. This will continue until the ice and air are of the same temperature; then they find their equilibrium and point of rest. This action can take place wherever this condition may be. This is Nature's light without heat. There is a pressure in the ice of heat, and around it of cold. They want to become equalized; they resist each other, and this struggle vibrates the tension, causing luminosity.

WHAT IS THE CAUSE OF CYCLONES?

A MASS of heated air is close to the earth, and a mass of cold air is pressing down on this heated air. The heated air presses up, and the cold air presses down. They press against each other. They are seeking an equilibrium, or point of rest. The heated air presses up, trying to break through the cold air, and the cold air is trying to do the same thing with the heated air; but these bodies are too dense. They cannot break each other's lines. These masses of air are moving, say with a velocity of fifty miles an hour. This mass in motion would not do much injury to the vicinity it would pass over as long as it remained in this condition. But suddenly the heated air breaks through the cold, and presses up and out into the cold space beyond the air. Now, there is no resistance to this heated air; it is pulled up into this cold space; for it is a vacuum, and this vacuum pulls the heat up into this space, and the air resists, and is pulled with the heat. This heat has found an outlet in this cold space. It has formed a circulation for the heated air close to the earth—has made a cylindrical opening through these masses of air,

and the heated air is pulled out through this cylinder into this cold space; and as this heated air is pulled up into this vacuum, the cold air is pressing down against the heated. This forces the heated air out through this cylinder with great force. The mouth, or opening, of this cylinder may be several miles in diameter, and the rush of air through this opening may be one hundred miles an hour; for the temperature of the air at the earth would be about seventy degrees above zero, and beyond the air about two hundred degrees below zero. These conditions would be seeking an equilibrium through this opening. The cold space would be a great pulling force. It would pull all the heat from the earth through this opening. This cylinder would be almost solid, for the air in passing upwards would have a screw motion. This would make the walls of the air around this cylinder rigid. The pressure of air passing through this cylinder would be constantly enlarging it until the heat and cold would find their equilibrium. If we have a cylinder, say two hundred feet long and about twelve inches in diameter, and at one end we raise the temperature to about one hundred degrees above zero, and at the other end we reduce the temperature to fifty degrees below zero, we will find the heated air will be pulled through the cylinder into the cold space with great force.

This will form a circulation of heat and cold; but the cold air cannot come to the heated air. It would be repelled, for the heated air expands, and the cold contracts; therefore, heat repels and cold attracts. The different temperatures are constantly trying to become equalized. This causes the air motion and circulation, interchange of place, seeking an equilibrium, or point of rest.

The cold is the point of rest. It is inert and dead. The heat disturbs this inertia by vibrating it. These vibrations are resisted by this cold tension, and it is thrown out of equilibrium, and all the tension of space is pressing into this disturbed space, trying to fill it and get its equilibrium; but the heat keeps up the disturbance, and the fight goes on. This is like trying to make a hole in the ocean ten thousand feet deep by disturbing this space. All the ocean would be ready to fill this disturbed space. And if we had a hose that would reach down ten thousand feet into the ocean, and pumped heated air down through this hose, this heat would have to displace this ten thousand feet of water that the hose would occupy; and as the heated air would escape into the water, it would be compressed almost into a liquid from the weight of water around it. All the ocean would be pressing into this space disturbed by the heated air. The

ure with it. This moisture, or heat, would be condensed into rain and pressed back to the earth again. This would be a tornado; for as soon as the heat reached the cold space, it would be condensed into water, and come back to the earth in torrents. These torrents of rain would break the solidity of the heated air in passing through it, coming to the earth. This would break the cylinder and equalize the pressure, and form a partial equilibrium between the heat and cold. Nature's pressures are continually seeking an equilibrium, or a point of rest, but the heat will not let them rest, for it gives life to everything by giving it motion. This motion is by vibrating the air and tension. The air is put in motion by these vibrations, but the tension is only disturbed, and it disturbs the air, and the air resists, and this action produces heat and life.

A LOOK INTO A MIRROR, OR LOOKING-GLASS.

WHAT do we see in this glass? It reflects our body, devoid of matter. There is no matter in this reflection, or shadow. As we move, it moves, but we cannot touch it, for it is not a substance. Now, this glass will reflect any substance, or matter, true to Nature; there is no deceit in this reflection.

We look in the glass, but we do not see the glass. We look through it or into it. The glass is in the tension, part and parcel of it, holding it at rest. The glass and tension are united; but the glass divides and holds the tension, making the glass solid, and the glass is the dividing line of the tension. Now, this glass is the tension in a rigid condition. It is as near solid as anything we can produce. The tension is everything, and everything is the tension; but the glass is transparent, like the tension, and is in harmony with it. This glass fills no space. It only occupies a portion of space. This glass holds the tension at rest, preventing vibrations, or waves, passing through it. The glass and tension is in equilibrium and at rest.

Now, this glass is like as if we cut its space out of the tension, and the silvering is near the color of the glass, and polished. This prevents us from looking through the glass. It cuts and divides these lines abruptly, preventing the light from connecting through the glass, and we look into the glass, but we do not see it. We are looking into the space the glass occupies. We are looking into the tension of space in the glass, and we are in that tension as solid as the glass, and are reflected through it. The tension reflects all matter, and all matter is incased in it and reflected through it.

Now, our eyes cannot see this tension, nor our body feel it, yet it is our life force. But if we could see it, we could see nothing else; but what we see is only a shadow in the tension, like our shadow in the glass. Now, anything with a polished surface will act like a glass; for this polished surface is not the matter, it is the tension, but the matter holds it at rest, so that we can act on it, or utilize it.

Now, the matter is only a piece cut out of the tension of space, and when we polish it, we see the tension, not the matter. The tension reflects this matter through it. Water is in the tension, and reflects matter, like the glass. It holds the tension at rest. We must have something to hold the tension at rest, so that we can act on it,

or see through it. All matter and tension are continuous; there is no beginning or no end. The universe is one solid mass of tension. The matter that we see is only condensed gas in this solid tension, and when we break or cut a piece off this matter, we cut it out of the solid universe. This cutting, or breaking, does not disturb the equilibrium of this matter; the pressure is always uniform. Nothing can disturb this condition but heat or vibrations.

This matter can be made larger or smaller only by heat or cold. These are Nature's two actions, producing all the various phenomena of force.

Now, the universe is one continuous mass, and all the planetary systems are condensed in this continuous mass. These planets are a continuation of the universe. Everything, from an atom to the earth, is a continuation of one and all.

Let us see what takes place in the manufacture of the glass. All the sand, gravel, flint, and material that go into the furnace to form this glass, is in the tension at rest, and is a condensed gas, or atoms, held in their forms by this tension, and all this mass fills no space, whether divided or solid. Now, the furnace occupies a portion of space, and the tension is in that space, at rest, and we take all this mass of material and

put it into the furnace. This does not displace any of the space of the furnace. The temperature is about seventy degrees above zero, and we apply heat to melt this mass. Every degree of heat we apply displaces, or raises, a degree of cold, and as the heat increases the cold decreases. The weight is being lifted from the mass in the furnace, and it begins to unite. The heat has lifted the cold pressure from this mass, and it became a liquid. Its atoms are all united by the heat. They are in motion and in life. They are free to move. Now, this heat has lifted about three thousand degrees of cold, and all the atoms are liberated, and are free to move without resistance. Now, all this mass is united by the tension in the furnace. The atoms have all combined to form a solid. This heat has lifted a great weight of cold. One is equal to the other. All this molten mass is in the tension, part and parcel of it. All this mass is only a condensed gas in this furnace and tension. They are one, and indivisible. We now draw off this molten mass into mould to form sheets of glass. This glass is cooling, and as it cools the tension of space is pressing all around it, compressing it into a solid. There is now three thousand degrees of cold holding it in this solid form.

The tensions in the glass and around it are united. They are one. The heat and cold have

made this glass solid in the tension, and it is in equilibrium and at rest, and it cannot get out of this solid form until three thousand degrees of heat are applied to it. This is a great pressure around the glass. Now, the glass is the tensions in a solid form. They are transparent and in harmony. Now, the pressure of the tension in the furnace was about ten thousand tons to the square inch. The heat lifted a portion of that pressure, and allowed the mass to become a liquid. Nothing but heat could lift this pressure. The heat expanded the cold tension around the mass in the furnace, and it became a liquid.

Let us see how this matter is melted into glass. All the material in the furnace is in the tension at rest, and we apply heat to this matter. This heat vibrates the tension and air in the furnace. This causes a circulation, or draught. This vibrates the tension around this matter, disturbing its equilibrium. This disturbance is in between all the particles in the furnace. This is disturbing the pressure that holds this matter in its solid form. The matter now has nothing to hold it together, and it dissolves. The tension in the matter resists the vibrations of the tension around it. This heats the matter, and the vibrations increase with the heat, and all this matter dissolves and forms a liquid. The

tension in the furnace is now expanded, and this expanded all the atoms. They now fill more space than when cold. This is the only period that matter can fill any space. The pressure of the heat around the cold tension liquefied the matter. The heat and cold pressed together and crushed the matter. The matter was the resisting medium. It resisted the expansion; it was occupying the space between the heat and cold, and this liberated all its atoms, giving them free motion in a fluid form. This heat had to raise three thousand degrees of cold. The cold held this matter in its solid form, and the heat raised the weight of cold, and it became a fluid. All matter is in the tension, and when heat is applied to this matter, it expands it. This expansion is trying to fill more space, but all space is full, and there is no room for any more matter, and this expanding matter has to press against all the universe. There is ten thousand tons to the square inch of surface pressing against this expanding matter. This is what crushes all matter, generating heat in it. This crushed matter is now a gas, offering no resistance. It fills no space, and is free to move out of the way of the pressure against it; and this gas is heat, and is pulled up to the cold air space and condensed, and pressed back to the earth, the point of rest.

Now, the action of the heat and cold crushed

the matter into gas, and forced this gas up into the clouds. This was the force exerted by these two actions. It was the work done. They raised that weight a certain height.

The tension we find is everything, and everything is the tension. The matter that we see is condensed gases. These gases are heat, for they resist the cold. Now, all matter is heat, and all space is the cold tension; and all matter is condensed into this tension, and anything that can vibrate, or make heat, will disturb the equilibrium of this matter and tension. This will generate heat in this matter, for it will resist these vibrations. Now, the tension is the one universal force. It is Electricity and Magnetism; it is heat and cold; it is our daylight and all other lights; it is the life of everything on the earth; it is mind and thought; it is gravity and attraction; it is cohesion, adhesion, and affinity; it is combustion; it is the Leyden Jar; it is the firefly; it is the glow-worm; it is the galvanic battery; it is the telegraph; it is the telephone; it is the medium of all sound; it is what holds all the planetary systems in place, imparting life and motion to them.

This simplifies all the phenomena of Nature's action of heat and cold.

The air around the earth is all in motion and circulation, disturbing all this space. It is like

the water in the ocean. As we go down into the water we find it all full of life, like our air. All the fishes and animalculæ are moving through it, without resistance, for without the water they could not swim. These fishes are all happy and active; they do not feel the pressure of the water. We find all these fishes breathing like animals on the land, but the fishes breathe water. They must obey the law that gives them life. This breathing disturbs the lines of tension generating heat, and this produces the circulation in them. This is the circulation of the sun and earth, and is imparted to all fishes in all waters, for these waters fill no space in this tension. The waters are a condensed gas, or vapor.

As we go further down we find the pressure greater, but it does not disturb or injure the fish. As we go down from ten thousand to fifty thousand feet, we find the waters swarming with all kinds of fish, swimming in all directions, apparently without any exertion. The pressure of the water does not interfere with their motion, yet there is several tons to the square inch around them. The temperature down here is about uniform, about fifty degrees above zero, and all the life down here appears to be in a happy and healthy condition. They are all moving around in their own family circles. These families do not quarrel with each other.

We find different currents of water at different depths. These currents run in opposite directions, and have different temperatures, like the air. Now, these different currents of water disturb the lines of tension and generate heat in this water.

The water holds the tension almost solid, and when two currents are moving in opposite directions, this disturbs the lines of tension, and heat is generated in the water. This expands the water, giving it more motion, and generating more heat. This is a continuous action. This keeps the water always in motion and agitation, keeping up the circulation in the water, like the circulation in the air. Now, these fishes move through the water like we move through the air, without apparent resistance.

We will now pass through the water of the ocean up to the north pole; and, as we approach it, we find it getting colder—degree by degree it increases until we come near the pole. We are twenty thousand feet below the surface of the water, and it is about the freezing point; but we can move through the water without resistance, and as we move towards the surface, we find the water is rigid. We cannot penetrate it, for it appears to be solid. It is a frozen mass for thousands of feet over our heads, and we wonder how this ice was formed; but we can move through

the water under this great mountain of ice as though there was nothing above us. This mountain of ice appears to be transparent, for we can see through it, and out into space, but we cannot move through it, for it is rigid and at rest; but the water down here is all in motion, and everything is moving through it. The temperature in the ice is from ten to sixty degrees colder than in the water.

Now, the ice is condensed vapor, and the water under the ice is the same, but they are separated by the different conditions of heat. The water is flexible, and the ice is rigid and at rest. The ice is like the cold tension of space outside the air space of the earth, and the water under the ice is like the air space around the earth. The air is in motion, like the water, and the cold tension beyond the air is solid and rigid, like the ice. The lines of tension in the ice are held rigidly, but the water disturbs these lines, generating heat in it.

Whatever has motion must have heat, for it is the motion that gives it heat. This motion disturbs the lines of tension in the water, generating heat in it. This prevents the water from freezing, and allows the fishes to move through it.

Now, the cold tension of space is rigid and at rest, and the earth, with its air space, is rolling through this cold, rigid tension, disturbing its

equilibrium, breaking its rigidity and generating heat. This makes the air and tension flexible, allowing everything to move through it without resistance; but if the air around the earth was rigid, and had no motion or heat, then it would be like the ice, and nothing could move through it, and there could be no life or motion; but the heated air breaks the rigidity, and gives motion and life to everything on the earth.

We find the universe in one, all united by the tension of space; and all the planetary system is a condensation in this tension, and all these planets are composed of atoms, and all these atoms have life and motion. These atoms are condensed, are consolidated, together, and they form and build up a world, or planet. All these atoms are seeking a point of rest, and they rest against their own kind, or family. These atoms have heat within them. This is their life and motion, and the atoms are a continuation of the universe. There is no space between these atoms; there may be distance, and these atoms fill no space in the tension, for nothing can expel, or displace, this tension but heat, when this heat is great enough.

Now, everything is connected and united, but can move individually. This movement is a continuation of the whole universe. Nothing can break or separate this continuity; everything

is moving in it, and is of it, and cannot get out of it. Now, there is nothing coming into this universe, or going out of it. It is full, and can hold no more; and everything that grows must grow up in this tension by condensation of the gases that are here. This growth brings no new matter with it. It is a continuation of the whole universe, a universal circulation. Now, all the planetary systems are united. There is no space between them. There may be a distance, but this distance takes no time for transmission, or communication. If we had a conductor that would encircle the universe, the time occupied in this communication would be the resistance in the matter, or the wire; but it would take no time in the tension, for it is one and indivisible.

Now, when we look at anything, we are looking at a part of the solid, or continuous universe. This thing is only condensed gases in this solid tension. It is only like a shadow in the glass. This thing can be vaporized, and would disappear in gas. This separation of the atoms of this thing would not disturb the space, or tension, that this thing occupied. These gases might be collected and condensed into a similar thing by heat. All this action, or change, would disturb the continuity, or equilibrium, of the universe, only during the period of change, and that would be the time of heating. This

heat would be trying to make a hole in this solid universe. The heated space would be all in vibration. It would be pressing against the whole universe, for this space would be expanded from the heat; but the heat is now removed, and the heat space is filled with the solid universe. It has found its equilibrium and point of rest in itself.

Now, if we could see the tension, we could see nothing else, for we would see through all matter, the same as we would see through a piece of glass, and as we would look at the earth, it would be like looking into space, and if we looked at a solid piece of steel ten feet square, it would be as transparent as the glass; but the mind can see through all matter. Everything is transparent to it when it once understands it. Nothing can insulate or separate mind; it is the universal tension and force permeating all matter and space, and mind looks through this like the glass. There is a limit to the eye's seeing, but there is no limit to the mind seeing, and there is no darkness, or recess, that the mind cannot pierce and see through.

Now, all matter being a continuation of the universe, this matter is the tension, and everything is of that tension, and nothing can insulate or divide it. We wonder why there cannot be some substance that will insulate magnetism.

Now, magnetism is the tension circulating through the magnet, and the magnet is filled with it, and nothing can separate or divide it, for all substance is condensed into this tension, and nothing ever can be produced that can divide it, for everything is continuous in this tension. The clouds are a partial insulation of heat and light. They contain moisture, or water, in a vapor form. All this vapor is in motion. It offers a resistance to the lines of tension, absorbing the heat and light, preventing them from passing down on the earth. These clouds partially separate the circulation of the earth's atmosphere, preventing the continuity of it. This is what causes the shadows. These clouds are from one to three miles above the earth, and the earth's circulation is about two hundred miles; and all the air space above the clouds is luminous, for all this space is in vibration from the circulation of the air, and as we look down on these clouds, we see them brilliantly illuminated, reflecting their light and heat upwards, thus cutting it off from the earth. These clouds are in layers of different density, rolling over each other, absorbing the heat and light into them, for these clouds are cold, perhaps in the form of fine snow. This snow can absorb large quantities of heat. This heat and light is cut off by these clouds, leaving the earth in partial

darkness, and cool. The clouds have absorbed the vibrations disturbing their continuity.

Now, all space being filled with the universal tension, anything that we may make, or manufacture, contains this tension within it, and is part and parcel of it, and nothing can separate or divide it. This manufactured article cannot insulate magnetism, or the tension, for they are one and indivisible; but anything that will not vibrate, or produce sound, deadens, or partially breaks, the continuity of the vibrations. This has a tendency towards insulating, but cannot prevent the tension from circulating through it.

This is why we cannot find an insulator for magnetism. Rubber, and all so-called insulators, are condensed gases in the solid tension, and this tension can circulate through them as readily as air can circulate through a wire screen with meshes an inch square. Nothing can confine, separate, or insulate the tension when heat, or vibrations, are applied to it. It is the great equalizing force, filling all space and all matter.

Now, electricity is not a thing, or is not generated. What we call electricity is only the tension disturbed by vibrations of heat. The vibrations cause the heat, for the cold tension of space resists the vibrations, and heat is the result of the battle. This is a disturbance of a permanent condition, but we do not generate, produce,

or make anything. We simply disturb the equilibrium of the space we are acting on, and this disturbed space seeks to find its equilibrium in some other space, and heat is not generated or produced.

The conditions to cause this heat are here; and when these conditions are disturbed, heat is the result of the disturbance. The tension is the inertia filling all space; and when this is disturbed, heat is the result.

All metals are atoms condensed into a solid. The different kinds of metals have different ranges of vibrations. They are of different families. These families travel on their own lines; when liberated, they are of different densities and different temperature—for it takes different degrees of heat to liquefy, or liberate, these metals. They seek their equilibrium, or point of rest, in their own families; they do not care to associate, or mix, with strangers. This they do only when man interferes with them, and confines them together, and applies heat to them. Then they are not free to act; they must submit to the greater force around them. This is man's will, not the will of the atoms of the metals. Now, all these atoms have their different modes of motion, and can rest only in their own embrace, or family—for every atom is seeking its point of rest. But it cannot rest against an

atom of another family—for they will not assimilate, or harmonize, owing to the difference in their vibrating structure. When two atoms of the same family meet, they embrace each other with the greatest love and emotion, and this emotion is imparted to each other through the tension that unites them. This tension now circulates through these two atoms, making them one; they have found their point of rest in their own embrace, and are united by the tension of space.

Now, these atoms can continue to combine and consolidate and form a mass. This mass will offer a resistance to the circulation of the tension through them. This will generate heat in them, and the tension will press against this mass, gradually compressing them into a smaller space. This action is constant, and will form these atoms into a solid—for their great love for each other causes them to press as close together as their density will admit. Now, all matter is atoms; and the atoms have their own families, and one family does not interfere with another. Each family is desirous to stay by themselves, if they are not molested or disturbed. This is Nature's simple way of keeping harmony in her vast families of atoms. One law, and one force, and all the universe, with its vast planetary systems, and their families of atoms, all obeying this one simple law, without any contention or

quarreling, all happy and contented, moving through space, traveling on their own lines or circuit, visiting each other on their journey through space. The visit is mutual, without contact. They communicate through the tension, not through their matter. Now, it is reasonable to assume that these atoms and planets have intelligence—for it is intelligence that gives them form and motion; and everything that has form has intelligence; it could not exist without intelligence—for the whole universe is one mass of wisdom beyond man's conception. Now, man must not think he is the only intelligent being—for man's intelligence is artificial. It is not natural; it is acquired. But all the universe, with all the planetary systems, is one mass of natural intelligence, from the atom to the earth. They obey the law of Nature, which is their life; but man ignores the law of Nature. He makes his own laws; and when he breaks Nature's laws, he suffers through his body for his disobedience. This suffering is in the matter of the body.

Now, man is an intelligent being. He is built up of atoms, and each one of these atoms has life, motion, intelligence, and reason. All these atoms perform their own work, and are in harmony and consolidated into this body, making it one; but these atoms in this body can

be separated by heat or cold, when it is great enough.

Now, all animals are built up of atoms of the same kind as man, and these atoms have intelligence and reason—for they obey the same law that gives them life and motion. These atoms composing man and animal are of the same families, brothers and sisters, male and female, in perfect harmony and accord, all assisting each other, with brotherly love and affection, to maintain the life of these bodies of man and animal. These bodies are a continuation and a part of the whole universe. They are part and parcel of all the planetary system, and are in communication with all this great universe. They are of it, united to it, and part of it, and nothing can destroy the atoms composing these bodies—for they always have existed and always will exist; and the space that these bodies occupy is the universal tension, and nothing can move this or destroy it. And when the atoms composing any of these bodies leave them, through heat or cold, this space that these atoms have left remains in this place, or space, and nothing can move this but the body that occupied it—for this body grew up in it, and acted on it, and retained it; and no other body, or matter, could occupy, or utilize, this space—for it could not get into it only by growth. No two atoms, or bodies, can occupy

the same place, or space — for all atoms and bodies hold this space, or tension, within them, and everything occupies its own space, and can get out of this space only by heat or cold, when it is great enough, and this must be by the atoms separating into gas. Each one of these atoms occupies its own space, and nothing can get into this space—for it belongs to this atom by growth. Everything must grow up in this space by condensation of the gases of atoms that are of the earth and air.

Now, each one of these atoms occupies its own individual space, and nothing can destroy this atom, or the space it occupies; and when these atoms condense together, being of the same family and of the same range of vibrations, all these atoms consolidate and form a mass. They are in harmony, and the tension circulates through them as if they were one. This causes a pressure around these atoms, and heat is generated in their mass. This causes the mass to vibrate, and the cold tension is constantly pressing around them, compressing them into a smaller space, forming them into what we call a solid. This solid is composed of individual atoms, surrounded by the tension of space. This is what holds them in this solid form. And when we can vibrate this space composing the atoms rapidly enough to destroy the equilibrium of this

space, then we can liberate these atoms; but these vibrations will cause heat in each one of these atoms, making them incandescent. These atoms resist the vibrations of the tension that holds them in this solid form. This resistance is what causes the heat, and liberates all the atoms, or gas.

A LOOK INTO WHAT TAKES PLACE IN A COMMON KETTLE WHEN BOILING WATER.

THIS kettle occupies a portion of space, and the tension is in that space at rest. We fill this kettle with water. This does not displace the tension, or space, in this kettle. The water was gas, and condensed into water. This water fills no space in this kettle. The tension fills all space; but the water is condensed into it.

Now, we apply heat to this kettle and water. The heat vibrates the tension in the kettle, producing a circulation, and the water resists the vibrations and circulation, and heat is generated in the water. The water prevents the tension from circulating freely, absorbing the heat, holding it. This heat is the vibrations against the water, the water resisting and retaining the vibrations and heat in it.

Now, all the water and space in the kettle are in vibration, from the heat applied to it. All the space in this kettle is thrown out of equilibrium from these vibrations. This vaporizes the water, and it goes off in steam. The tension in the kettle divides all the atoms, or molecules, of the

water, separating it, and the heat applied increases the vibrations, preventing the water from holding together.

The water is seeking an equilibrium, or point of rest, but the heat will not let the water rest; and as the heat increases, the vibrations increase, and the water is vaporized, going off in heat or steam. Now, the tension in the kettle of water cut and divided this water into steam. The particles of water could not hold together, and they were crushed into vapor, or steam, and this steam goes up into the clouds and condenses into rain. This is Nature's simple circulation.

The space in this kettle was the tension of space, and when it was disturbed by the vibrations, produced heat. This heat was trying to make a hole in this space; but all the tension was pressing against this vibrating space in this kettle; and as the heat increased it pressed against the cold, and the cold resisted the heat, and the heat resisted the cold, and the water was vaporized, or crushed, into heat, or steam. The water resisted the action, or pressure, of the heat and cold, and was crushed into vapor. This water expanded, and tried to fill more space; but all space is full, and can hold no more, and the cold tension pressed against this expanding water, and crushed it into vapor—for it could not fill any more space and hold its form as

water. It must take the form of gas, filling no space. Now, all this gas, or steam, is divided into atoms, or molecules, and is floating in the tension, but it cannot divide it. The tension can divide everything, but nothing can divide the tension. It is indivisible, and everything is condensed into it; and when vibrated, it separates everything, giving it freedom in a gaseous form, where it came from. This is Nature's way of separating and equalizing her presssure and force. Now, this steam was not generated or produced. It was condensed water, or vapor, held in the tension, and when this tension was vibrated, it vaporized the water—for the water resisted these vibrations, and heat was the result. The heat was not generated or produced; it was a disturbance of the tension in the kettle. This tension is a permanent condition, and anything that can vibrate it will cause heat—for these vibrations are resisted by the water and tension, and heat is the result of the fight.

We have not been able to find a secret or mystery in all the phenomena that we have enumerated—for heat and cold produce all these phenomena, and these actions, we are well acquainted with, for we see them in every action of life and motion around us. We see it in the coal and wood fire, cooking our food and heating our bodies, lighting our houses and streets, propel-

ling our ships and railroads, running all our machinery for all purposes. We find them making rain, and ice, and snow, wind, hail, and cyclone storms, thunder and lightning, sunshine and calm; producing fruits and vegetable life, and all beautiful flowers, with their various colors and hues. These are no secrets or mysteries. We find them in the magnet, giving it circulation; producing electricity encircling the earth, imparting our thoughts to it. This is no mystery or secret. We are using these forces, and utilizing them, and handling them, and if we are ignorant of their nature, it is not Nature's fault.

We are familiar with the telephone, but not its nature. We are well acquainted with life, for we see it all around us; but we say this is the greatest mystery of all; yet we see everything around us has life. It is a very common thing, but its nature we do not understand. This is our fault, not Nature's; but we feel the effect of heat or cold when it is too great for our bodies. There is a certain condition of heat that we like. This is Nature's guide; but when we are surrounded by cold, the body shivers. This generates heat in it by vibrating the tension, and the matter resists, and heat is the result.

Everything in Nature is simple, and open for investigation, for all who want to understand her

law and force. Everything is a mystery to those that do not want to investigate or seek the truth of Nature. This is the truth, that cannot be confounded, confuted, or contaminated. It is the universal force, and truth, and life of everything in the universe, and the fundamental principle and foundation of all truth, everlasting, one, and indivisible; and when man understands this truth, and lives in it, and up to it, then he will raise himself above the animal that he is, and his mind will be unchained, and set free, to soar into space, illimitable space, with all the planetary systems throughout that space; and man has all this as mind and thought, all at his command, and he can communicate through all this vastness. This whole universe is all mind, and man is part and parcel in and of that mind, and everything is solidly incased in that solid mind. How could man ever get out of the animal without knowing what mind and thought is, and life, and motion, and the law of Nature, with its force? Man's mind had no conductor, or lines, to travel on. It had no basis, or foundation; it was wandering without a guide, or a connecting link, to travel on; but when he once understands what he is, and what relation he bears to the universe, then his mind will be elevated beyond the matter of his body, and he will be lifted from ignorance into the most exalted

position, or place, that man could occupy. It will be from darkness to light everlasting.

How simple every phenomenon and action in Nature is, when we once understand it, and its cause. Everything existing has mind—for all space is mind, and all matter is incased in that solid mind. This matter may be divided, but the mind is indivisible, and indestructible. How could anything be destroyed? What could destroy this thing? A thing cannot destroy itself. Man may kill himself, but he cannot destroy his body. If he consumes his body, he does not destroy it; he simply liberates the gases composing his body, allowing these gases to go free and assimilate with the gases composing the air. These gases cannot be destroyed. Nature never made anything that could be destroyed. Everything can change from a solid to a gas, and from a gas to a solid. This is done by heat and cold. This is Nature's process of changing places through her circulation. If we could throw the matter off the earth into space, it would not be destroyed. It could not get out of the universe—for there is no beginning or end to it, and it would always remain the same matter. There is nothing coming or going out of all this universe. The same quantity remains eternally, for all the universe is filled more solidly than steel, and nothing can break this solidity, for everything is

incased in it, and is part and parcel of it, and united to it, and this is all mind and matter; but the mind can crush and circulate through this matter—for this matter is only gases condensed into mind. Mind is the solid universe, and how could anything exist without mind? And if this thing has mind, it must have reason, and if it has reason, it cannot be destroyed, for reason is the universal tension.

MIND AND ITS RELATION TO THE BODY.

THE body is a receptacle for the mind, and all space is mind, and this mind must have matter to hold it, to act on it. The body holds this mind, and acts on it, and utilizes it, it being the life of the body. This body is only a shadow floating in the mind. All the nervous structure of the body is vibrating in this mind, giving life to this body. This action is harmonious and reciprocal, and the more the nerves act on the mind, the more mind they utilize. All the blood in circulation through the body is disturbing and acting on this mind; but the brain is the seat of thought and reason. Its nerves, being fine and sensitive, are able to act more and oftener than the nerves of the body. The nerves of the body are very coarse in comparison to the nerves of the brain; but the brain is the center of all the nerves of the body, and is the center of all the universe. It is a central station, communicating with all the universe, and the more the brain acts on and communicates with the universe, the more it understands and sees through it. Now, the body cannot act without

the brain. They are united and indivisible. They work in harmony. One is necessary to the other, each has its own work to perform. The body is guided by the brain, and can act only through the will of the brain acting on the mind. The mind is the universal force, and mind fills all space and matter. The brain has all this to act on and utilize. Now, if the brain does not act on this mind, it does not utilize it, and cannot understand it; and so the brain has no mind when it does not utilize or act on mind. Now, all matter acts on mind, but all matter has not brains, or nerves. These are of the animal family, having self motion.

This motion is through the brain acting on mind, and the mind acts through the nerves and muscles of the body, and motion, or movement, is the result of mind acting through nerves and muscles, or muscles acting on mind. These actions must be harmonious to cause motion. The brain acting on mind, guides and directs the motion and action of the body, but all the body is acting on mind. This is the life and force that the body is using, and this force never varies; it is the matter of the body that varies—for the more the body acts on and disturbs this mind and force, the more mind and force the body exerts. Now, if the body and brain does not act on, or utilize, this mind and force, it can-

not exert mind, or force, and this body would be existing without exercising mind, thought, or force. It would be merely occupying a portion of space without utilizing the conditions in that space.

Now, the body has the use of mind and force, if it wants to use or act on this force. Everything has the use of this mind and force, and they can utilize it according to their structure, or capacity, to act on it. Now, man's intelligence and thought are through his brain acting on his mind, and the more he exercises and uses this mind, the more mind, or intelligence, he acquires. Thought and thinking are what exercises mind, for the nerves of the brain are acting and vibrating this mind. They are getting acquainted with each other, and are acquiring a friendship, and love and harmony, and are assisting each other to perform their work of investigation, and acquiring intelligence, experience, and knowledge. This is the work of the nerves of the brain on mind, and the more nerves the brain has the more mind and thought it exercises. A small brain acts on a small surface, or quantity, of mind, and cannot exert as much mind as a larger brain. If this brain is of a fine texture, or highly sensitive, its organs are well developed, and well exercised, by thought and study, and all the organs of the brain assist each other. If these organs are exercised and used

harmoniously, this strengthens the brain and prepares it for a great mental work; but if the brain is concentrated on one subject, or thing, then it becomes weakened in all organs but the one that the mind is concentrated on. This one consolidates and controls all the weaker ones, and the brain becomes of one idea, or one-sided, and loses its balance—for it cannot understand, or reason, on other subjects outside the one it is interested in; and the stronger rules and controls the weaker organs, making them slaves to it; and the brain is now concentrated on one thought, or one object, and is controlled, and influenced, by this thought, and is carried away by it, and lost in it, and all the other organs of the brain are weakened and reduced in vitality for the want of use, or exercise. This is why so many brains exercise so little mind and reason, for these brains are not balanced, or in harmony. The organs do not assist each other, by consulting, consoling, and reasoning with each other —for all the organs of the brain are like a large family, in perfect accord and harmony, consulting and reasoning, advising and assisting each other to perform their various works, or studies. These studies with the organs of the brain, by the body's assistance, bring the brain and the body into harmony, and they learn to know each other, and they gain confidence, strength, experience, and wisdom by harmonizing.

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[illegible] of actions [illegible] is simple. [illegible] of these names. [illegible] space, and [illegible] of everything else. This con- [illegible] into a moun- [illegible] everywhere. When [illegible] together, they are seeking [illegible] against each other. [illegible] the illusion of space. [illegible] together. They are un- der the same [illegible], and [illegible] the same range of vibrations. They are in harmony, and they are seeking each other—if they are of the same [illegible] they are brothers and sisters, male and female, [illegible], and no quarreling or [illegible]. They are in perfect accord, and in harmony, moving in their own lines. These are the lines of tension. These lines are the guiding lines for all matter and all action. All ranges of vibrations have their own lines, and these vibrations do not interfere with each other; they never make a mistake. They mind their own business as long as they are not interfered

with. It is only when man handles, or annoys, them that they make trouble. All the different kinds of atoms have their ranges of vibrations —for all atoms offer some resistance to the lines of tension, and heat is generated in them. This is what gives them motion, and this motion is peculiar to themselves, or to this family, and when man handles, or incloses, these atoms in a receptacle, then they find their relatives and join them. They are seeking a union, and want to be united, to resist and defend themselves. Are these atoms intelligent, or is man the only intelligent being, or is he more than an atom? These atoms have life and motion; what more has man? The same force gives motion to man and atom. They are obeying the same law. They cannot resist this law, for it is their life. Now, these atoms are guided by the structure of the matter within them. This matter resists the circulation of the tension, and heat is generated in them, and circulation is produced. This circulation is an interchange of heat and cold. This vibrates the tension, and the tension vibrates the atoms, and the atoms resist, and heat is the result. The same action gives man life—for Nature knows, and has, but one law, and everything must obey that law. Now, the earth is a large atom, or a concentration of atoms. It is a resting-place for all atoms that may approach it; and all these

atoms are separate and individual atoms, but are consolidated into one mass to form a planet world.

Now, the earth and sun, and its systems, are one family. They are in perfect harmony, and in the same ranges of vibration. They are assisting each other to generate heat, to maintain life. How could this family of worlds maintain themselves, if they were quarreling, or fighting, and burning each other up, in order to dissipate that heat into space for no use? Can Nature be so unwise as to waste all her energy for no purpose? Nature wastes, or consumes, nothing. Man being a wasteful and destructive being, he loves to waste and destroy all the resources of Nature for his own selfish purpose, not caring how Nature may suffer by his destructiveness.

Man looks at Nature through himself, not as Nature looks at him. Nature is liberal; it has no favorites, it has but one law. Man makes many laws, and he breaks them to suit himself; but Nature ignores these laws. Nature is supreme. We see all the atoms have their mode of motion, and these atoms cannot go astray, or be destroyed, or burned up. They are indestructible. Like all other matter, they are traveling on their own lines, and in their own circuit, and it is reasonable to assume that all the planetary systems are moving like these atoms, in perfect harmony, traveling through space, visiting and

saluting each other as they pass—for they are all brothers and sisters, male and female, all of one family, having an intense love for each other. They are encircling the universe, and communicating with each other—for they are all united by the tension of space.

Now, everything that has form must have heat within it—for that it has form is a proof of its heat. This heat is its life. Let us take a block of ice and put it into an iron tank, suspending it in the center of this tank. This block of ice is, say at a temperature of twenty degrees above zero, and we reduce this temperature in this tank to twenty degrees below zero. This makes a pressure around the ice. This cold pressure around the ice is trying to crush out the heat in the ice, and the heat in the ice presses out against the cold. The temperature of the ice is forty degrees higher than around it. These two pressures are pressing against each other. They are exerting force. They are trying to become equalized. They are seeking a point of rest; but the heat in the ice will not let the cold rest, and as we increase the cold, the ice resists it, for it takes some time before these different temperatures can become equalized; and we still continue to reduce the heat around the ice until we reach about two hundred degrees below zero. This is the critical point. There is

a great battle between the two. This ice is the heat. It has to fight the cold. The cold is constantly reducing the heat in the ice, and as long as the ice can keep out this cold, it can maintain its form and circulation. This is its motion, or life. It is not inert, or dead, as long as there are two conditions of heat in the tank. Now, this ice was heat, and the cold crushed that heat into vapor. The ice occupied the space belonging to the cold. As long as the ice could keep out, or resist, this cold, it could maintain its form; but as soon as the cold crushed out all the heat of the ice, it became vapor, and this vapor was crushed matter, or heat. The action of the heat and cold vaporized the water. They were seeking an equilibrium, or a point of rest, but the heat would not let the cold rest until it was conquered; then the cold took possession of the heat, and there was no more action or resistance, and the cold found its equilibrium and point of rest, and is inert and dead. This cold is equal to any heat produced. The heat is a product and inconstant. The cold is constant and natural. These two actions produce motion, life, and all the phenomena in Nature. The ice was water, and the water was condensed gases. These gases were atoms, and these atoms had form and heat within themselves. This heat was their life and motion.

These atoms were consolidated into water. They were of their own families, and in harmony, and floating in the tension of space, but these atoms filled no space. They were only a gas, filling no space. The tension fills all space, and there is no more room for any more matter. The water was the atoms condensed into the tension, and the cold compressed them together, forming what we call a solid.

The heat in the water, or atoms, resisted the cold, and the cold resisted the heat, and the atoms were pressed together, forming the block of ice. If the ice could not resist the cold pressure, there could be no motion, or ice. As the cold increases, the ice resists it, and this is what gives form to the ice, and all other matter. As long as the ice can resist this cold, it can maintain its form. This resistance is the heat in the ice, for all the ice is heat when the cold is greater around it. Now, these atoms were the matter, or heat, but the cold was too strong for the heat, it crushed it into gas, or vapor, where it came from, and all these atoms are free again. They could not retain their form against the cold tension around them. The ice was occupying the space belonging to the cold, and this space could not hold two matters. Either one must be subdued or displaced. Heat and cold cannot occupy the same place, or space.

An atom of heat and an atom of cold coming in contact, the heat expanding and pressing against the cold, it repels it, and the cold shrinks and absorbs the heat into it. There is a battle between the two atoms. They are in contact—they are seeking a point of rest; but they cannot rest against each other, for they are enemies. They are not in harmony. The cold tries to devour the heat, and the heat repels and presses against the cold. This causes the cold to expand and the heat to shrink. They are trying to become equalized. These actions are vibrating the tensions in and around these atoms. This generates heat within them, and this keeps them in motion, for they cannot rest, as the atoms are continually changing places and conditions of heat. This is what disturbs the lines of tension, preventing them from concentrating, or becoming rigid, or at rest. This is what generates heat and light in our atmosphere.

We find that all atoms have heat, and can generate heat in motion. These atoms appear to be heat, for they resist the cold and are put in motion, and circulate through the air. This circulation extends, perhaps, two hundred miles beyond the earth. These atoms, in ascending, are resisted by the cold, and pressed back to the earth in the form of rain. This rain was gas, or atoms, condensed into rain. This rain is con-

densed heat, and was pressed to the earth, the point of rest. This is the earth's circulation and life, and the life of everything on it.

WHAT IS A RESISTANCE COIL?

A RESISTANCE COIL is a piece of iron and some copper wire. We wind this iron with the wire as a resistance; this causes the iron to become heated and expand, preventing a free circulation of the tension through the iron. This iron fills no space in this solid tension. It is a gas condensed into this tension. Now, this iron is a continuation and part of the whole universe, indivisible, and it offers a resistance to the free circulation of this universe; and the wire is a part and parcel of this universe, offering a resistance to the free circulation of this tension, causing heat; and the more wire we wind around this iron, the more resistance it will offer, and the more heat will be caused in it. The current vibrates the tension in the wire, and the copper resists and is heated. This heat is imparted to the iron, and sets its tension in vibration, and the iron resists, causing heat.

Now, this iron is in the circuit, offering a resistance to its free action and circulation, and heat is the result. All this space that this iron and wire occupy is thrown out of equilibrium, and is in intense vibrations, and wants to rest;

but the current applied will not let this disturbed place rest, and the heat and vibrations are continued, and the battle goes on. Now, everything in the universe, from an atom to a planet, or world, is like a resistance coil. They offer some resistance to the circulation of this tension through their system, causing heat, light, motion, and life.

NATURE OF THE GALVANIC BATTERY.

KNOWING the conditions of space, we take a two-cell battery. It is ready to be operated. The metal occupies a portion of space; whatever is in space is in the metal. The acid acts on the molecules of the metal and sets it in vibration. These vibrations are imparted to the tension in the metal. Now, the metal being in vibration, the tension outside and around the metal is constantly pressing into the metal. This puts the vibrating tension in motion, and produces electricity, or galvanism, or circulation. This is the same as the magnet. There must be an inlet and an outlet for the two poles. The pressure passing in one pole must find its equilibrium through the other. It matters not how long the circuit may be, the time of displacement is the same. The acid acts on the metal, heating it. The heat vibrates the molecules of the metal, and they vibrate the tension in the metal, and the tension around the metal presses into it, producing the circulation, or flow, through the poles, or circuit, of the conductors. The zinc, or lead, is filled with the tension of space. The acid acts on its atoms, dissolving them, producing heat in

the metal. The natural condition of the metal is cold, and the heat has to raise, or displace, the cold to produce the circuit, or circulation.

WHAT IS THE TELEGRAPH WIRE?

THE telegraph wire is simply a hole in space, and the current a displacement of the tension in the wire. The tension of space is in and around the wire. The lines pass through the wire, and the battery is applied, and the lines in the wire are disturbed from the outside tension, for every vibration the battery makes, there is a displacement of the same quantity at the other pole, or end of the wire in circuit.

WHAT IS THE ELECTRIC LIGHT?

THE dynamo acts on the tension in space, and the wire is the tube for displacing it. The arc light, or carbon, is near the tension of iron, and hard. If we follow the process of manufacture of the carbons, we will find the main object is to get them hard and close-grained. The hardening and tempering puts them in tension, and makes them sonorous and good conductors. The carbon points are separated a little to break the circuit. Now, this space is the resisting point. The tension is the resisting force; the carbon points try to force a hole through it and are opposed. The carbons hold the tension in them, and the tension outside presses against them, and this pressure vaporizes the carbons, and the tensions become luminous. The inside of the carbon is in vibration, and these are resisted by the outside pressure of the tension. One pressure resists the other, and there is a battle between the two opposing actions. Nature resists, and light is the result of the battle. When the current is in the carbons, they are in vibration, and the tension of space is pressing against them. This causes all the resistances to

be concentrated at the points of contact. This is where space is broken, or open.

The carbons occupy a portion of space. The current vibrates the tension in the carbon; this breaks the lines of the inside from the outside, throwing all resistance to the points, this apparently making a hole in space.

STEAM WHISTLE.

THE metal of the whistle is incased in the tension. It is part and parcel of it, and when it vibrates, it imparts them to the tension around it. The air resisting, is vibrated, and acts on the tension, carrying the sound wave, or vibration. The metal is solidly incased in this tension, and when vibrated by the escaping steam, these vibrations are imparted to the tension around it; the air resisting and carrying the sound into space.

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VITAL FORCE AND ITS NATURE.

IN reviewing all the phenomena of vital force, and its effects and results, we find that the great pressure around all bodies is the cold tension of space. It permeates everything. It is our attraction, for it presses all matter to the earth, the point of rest. It pulls the heat out of the metal, compressing it into a solid. It is the life of the magnet, causing its circulation and magnetic attraction, and electricity; producing heat, and light, and power, encircling the earth, communicating with all its people, imparting our thoughts to them. It is the secret of the Leyden Jar, making its light. It is the light of the glow-worm, and its life, and of the fire-fly, its life and light.

The galvanic battery, and its phenomena, are through its actions. The telephone is the medium through which it carries our voice and sounds. It is the producer of lightning, causing thunder, wind, rain, and storms. It is the cause of all sound, conducting the same. It is the cause of the phenomenon of candle and oil light, and all other lights are produced through it. We find it hidden in the coal, holding it to-

gether, ready to be acted on and liberated, producing heat. Cohesion is no more a secret. It exposes its action, showing that it is pressure that holds matter together. This is the pressure that holds the earth in form and place, connecting it with the sun, imparting life to it, and producing its heat and light. It is in the sea, and all waters, imparting life and motion to the fish, and all other animalculæ therein.

We find it is the life of everything on earth, even man; he, being a product of the earth, must obey the law that governs it. He is matter, and has mind, or brain. This brain acts on this force—that is, his mind—matter acting on mind, or mind acting through matter. This is his brain power, or force. We find it in the resistance coil, holding it rigid and at rest, resisting the circuit, generating heat. It is the life of the dynamo and its power—the force that propels the motor, and its life. All the phenomena of the sunbeam is through this medium, producing the molecular motion of heat and cold, shrinking and expanding. It is in the seed, in the plant, in the tree, being its circulation and life. We find the birds have it in their bodies, acting on it, giving them great power of endurance, it being their life force. It is in the rock, holding it together in all its forms. It is the medium that holds all metal in its rigid

form, pressing its atoms together. We find it always ready to be acted on. It is always harnessed, ready for the driver, a willing and obedient servant; no limit to its resources, and not displaceable or compressible—indestructible and everlasting, as gentle as a lamb, and as fierce as a lion. All ranges of vibrations act on it, producing all the phenomena that we have seen and enumerated. We find it produces all the phenomena of all the various colors in Nature throughout animal and vegetable life, and the rainbow, with all its variety of hues, is from vibrations on it. All the beautiful flowers, and their various colors, are produced through it. All the great variety of our tropical birds, and their various colors, are blended by this tension. The different ranges of vibrations produce different varieties of colors. All the various sounds and music, and musical instruments, and their variations, are through its actions.

All the different forms and expressions of the human face, and all bodies, are its work. All thought, mind, and remembrance are impressions on it, through the nerves of the brain. All feeling, and sensation, and seeing, tasting, smelling, eating, drinking, hunger, thirst, enjoyment, disappointment, ambition, anticipation, love, hate, life, and death—these are all natural results of the tension of space through all matter and

bodies—for all matter and bodies are inert, and dead, when cold. The heat gives them life by raising the cold that holds them rigid, and allows them to move, or gives them motion.

What is this heat that moves the cold, and gives it life? Anything that can vibrate on this cold tension will produce heat, for it disturbs its lines, and it resists, and heat is the result. There are only two actions in all the phenomena of force—heat and cold. One is equal to the other, and anything that disturbs the cold generates heat, for it takes heat to displace the cold. All heat is vibratory, expanding the molecules, or atoms, and they vibrate the tension by expanding it, filling more space. When the vibrations are rapid enough, they generate heat and light. These vibrations must be very fine to be able to reach the lines of tension. The air is the medium to act on this tension and vibrate it. The air molecules are floating in the tension, and when they are disturbed, they vibrate on it, and are expanded, and put in motion, which is circulation. This circulation disturbs the lines of tension, constantly crossing its lines, producing heat, light, and life.

In observing the different phenomena we have not been able to find a force, or action, in Nature

that we could call electricity. What we call electricity is only a disturbance of the cold tension of space, and this is done either by vibrations or heat. One is equal to the other. These actions are the only things that are fine enough to reach it. They disturb its equilibrium, and prevent it from resting, and it rests in the magnet, for the metal of the magnet offers a resistance to this tension, and heat is generated in it, and a circulation produced. This circulation is the interchange of heat and cold through the tension. We cannot call this magnetism—for it is not the metal in the magnet that generates this force, or circulation, or pull, as the magnet does not pull, or attract, anything. It is simply a point of rest for particles of iron. These particles of iron are filled with the tension, and offer a resistance to the circulation of this tension, and are pressed into, or against, the magnet. Now, these particles of iron are resting against the surface of the magnet. They cannot move any further, for the magnet resists them, but the circulation still continues; and as we place the armature across the poles, it offers a resistance to the circulation of the tension, and is pressed into the poles, filling them; but the circulation still continues through the armature. The pressure is on the outside of the magnet at this time. The armature and magnet have found their equilib-

rium and point of rest. They are united by the tension of space.

Now, when we act on the magnet, we are acting on the tension of space that the magnet occupies, and when we disturb the circulation between the poles, we are disturbing the equilibrium of the magnet; and if the magnet can sustain one hundred pounds, we are then acting on a pressure, or force, of one hundred pounds, and the more we disturb this space, the more force we produce. This is the only force that we have been able to discover in all the actions and phenomena of Nature. It is the universal and only force that we have been able to discover in all the actions and phenomena of Nature. It is the universal and only force.

We cannot find any action in Nature that we could call cohesion. It is the pressure of the cold tension of space that holds all matter in its solid form, and the heat liberates this matter. Now, this heat is not a force—for there could be no heat if there were no resistance. The cold tension is the resistance for all heat produced.

We cannot find anything in Nature that we could name attraction. No bodies can attract each other. They are pressed together by the cold tension of space.

Gravity is a name that does not harmonize with Nature's law. The cold tension of space

presses everything that is of the earth to the earth. Nothing can get away from the earth but heat, and when this heat has reached a certain distance, the cold condenses it, and presses it back to the earth, to the point of rest.

Now, the earth resists all matter when this matter is pressed to it. The earth is like the magnet. We find that the iron resists the circulation and is pressed into the poles, they being the point of rest. Now, all matter resists the circulation between the sun and earth, and this matter is pressed to the earth, the point of rest.

This matter can go no further. The earth resists it, but the circulation continues through the earth and back to the sun. The matter simply offers a resistance to this circulation, the same as the magnet. This tension can circulate through all matter. But all matter offers some resistance to its circulation, and this is what presses all matter together, for the tension presses everything into as small a space as possible, holding it in this form. Now, the earth is the resting-place for all matter within the earth's circulation. This is perhaps two hundred miles, radiating out in all directions, and any matter that may come within these lines will be pressed to the earth.

How does the matter resist the circulation? Let us stretch a fish net, or seine, in a river, or

bay, where the tide is running at full speed. Now, this net will offer a resistance to the motion of the water. It will resist the water, and the finer the meshes in the net, the more they resist the motion of the water. Now, the tide wants to carry the net with it, and it takes a great force to prevent the tide from carrying it. They resist each other; but if the net is free, it will move along with the water; and if the meshes are filled, or closed almost solid, then it receives the full weight, or pressure, of the moving tide, and it would be almost impossible to prevent it from moving with the water. Any matter that we may suspend in the water will offer a resistance to its motion. This resistance will be in proportion to its density. The moving water is seeking a point of rest, so it rests against anything that may oppose it, but the tide moves on.

In concluding, or summing up all the phenomena that we have enumerated, we find these phenomena to be very simple and very few, only two actions and one force. The cold tension of space is the inertia, or dead weight, filling all space, and all matter is a condensation in this tension, by this tension—for this tension vaporizes all matter. We cannot find any matter, or substance, that can dissolve, or vaporize, the tension. It is indestructible, immovable, non-

compressible, and non-displaceable, and non-divisible. Now, this tension appears to be the matter, if there is any matter. It is the solid—for nothing can divide or separate it. It is the solid of the universe; and what we call a solid, or matter, is only a gas condensed into this solid tension. Now, this solid tension fills all space, and there is no room for any more; and when we produce heat, we expand, or press against this solid, cold tension. This heat is trying to displace, or force a hole, in this space, and all the universe is resisting this heat, or expansion. The heat and cold press against each other, and they exert the force, and whichever is the strongest must be the victor. This struggle keeps up the force. If there were no cold, the heat would have nothing to resist it, and there could be no action, or force, exerted; and if there were no heat, there could be no resistance, or motion, action, light, or life. The heat and cold pressing together crush the matter into vapor. They crush everything that resists them into an invisible gas. This gas is the crushed matter. It is pulled up to the cold space and condensed, and pressed back to the earth again, to make more matter. This is a continuous work of Nature of keeping up its circulation of heat and cold, shrinking and expanding. This gas is floating in the air in atoms. These atoms are

separated from each other by the air; but if these atoms could come together in the outer part of the atmosphere, and a sufficient number of them unite to form a mass, or cloud, this would offer a resistance to the lines of tension, and heat would be generated in this mass. The interior of this mass would be put in vibration, and the cold tension around them would press them into a solid. This solid would be pressed to the earth, and as it would pass through the air, it would be heated to incandescence—for the air would offer a resistance to its descent. This would be a very solid matter—for the pressure of air and tension would be pressing against its mass; it would be encroaching on them. It would be occupying their space. This solid would contain all the different gases of all the metallic substances known to us. These gases would now be a solid, or as near as we can get to a solid, for Nature has made this solid in her own way. This gas could be solidified in this way in perhaps one minute.

The volcanoes are continually throwing off gas. This is matter of all kinds, and metals of various kinds, in a vapor form. This vapor is sometimes forced beyond the air space. This vapor is heat, and is pulled up to the cold space and condensed. If there is a sufficiency of this

heat in a body to be suddenly chilled, this chilling would condense, or press this heat together—for this heat is matter, and this matter would be solidified, and then pressed back to the earth, the point of rest; and as it would descend, the air and tension would resist its motion, and it would become incandescent, and as hard as flint. Now, this would be the volcanic vapor condensed into a volcanic solid. This is a continuous work of Nature, a simple circulation of heat and cold. The heat vaporized the matter in the volcano. This heat was pulled up to the cold space and condensed, and pressed back to the earth, the point of rest.

The heat did as much work as the cold; one is equal to the other. Great masses of heat are ascending from our smelting works and furnaces. This heat is crushed matter, and may ascend beyond the clouds in a mass, like smoke. We can see the smoke ascending, but we cannot see the heat, or heated gas. It is invisible. If the air is calm and no movement to it, this heat can ascend beyond the clouds, and beyond the air, as long as the furnace supplies this heat to maintain the force. Now, this heat has formed an opening through this space like a cylinder, and the cold space pulls this heat up into the vacuum—for this cold space is a vacuum of heat. This heat is in the form of a cloud, or balloon-shaped.

Now, there is no air around this heat to disturb its equilibrium; it is floating up above the air in a mass, and the heat from the furnace is expanding this mass, and the cold tension of space is pressing all around this mass. There is a pressure inside of heat, and a pressure outside of cold. They are resisting each other. The cold is constant, and presses all around the heat, gradually compressing it into a smaller space, and the heat concentrates all its force to resist the cold. As this mass becomes smaller, it gets heavier, for the cold is pressing the heat out of it. The supply of heat is suddenly cut off by a movement of air, or the stopping of the furnace. This gives the cold possession of the heat. The cold then soon condenses, or compresses, this heat into its own embrace, and makes it solid, and presses it to the earth, the point of rest. This solid is the gas that arose from the furnace. It is the crushed matter, or heat condensed by the cold tension of space. What would this matter contain? All the elements of the furnace and air. These would be concentrated in this solid mass, and this mass would be harder than anything that we could produce—for it was forced from a very high temperature to a very low one. This sudden chilling, and cold pressure, solidifies the gases and makes them hard. If a portion of these gases were from a glass fur-

nace, and the heat in the furnace was great enough to vaporize the glass, and this vapor could ascend in a mass, or cloud, and get beyond the air space, and be suddenly chilled by the cold, say this cold would be two thousand degrees below zero, and the heat in the vapor four thousand degrees above zero, then the vapor could hold its form against the cold. The cold would press all around the heat, gradually pressing it into a smaller space. There could be no air around this heat, nothing but the pure gases and the cold tension of space. They would be resisting each other, and the gases would become a solid; the center of this gas would be the hottest part, for the heat would be concentrated. It would become a liquid, for the gases would be pressed into a liquid, and as this mass would be cooled under the cold pressure, it would imprison the tension of space within its mass.

Now, this mass is a solid, and has become weighty. The heat has been extracted from it, and the cold took its place, giving it weight. This weight is pressed back to the earth; and as this solid would pass into the air, it would meet a resistance, and would become heated. The heat would expand it, and it would explode from the resistance of the air. And if we could find any of these pieces, we would find a diamond—for the chilled vapor, or glass, would be

as hard as a diamond, and the tension would be imprisoned within the glass. It would be under strain from the sudden chilling, and expanding, by the heat, generated by the resistance of the air. The same actions are taking place in the furnaces and volcanoes, and when there is a sufficient quantity of this heat in a mass, it gets beyond the air space, and is there cooled in a temperature of from one thousand to five thousand degrees below zero. This is a great pressure, and anything that can withstand it will be as hard as diamonds, or any matter that can be made. Now, these gases have been condensed under a cold pressure of about four thousand degrees. This pressure holds them in their present form, at rest; and if we raise or lift this pressure off them by applying heat, they will go off in a gas again. The heat raises the weight from them, and allows them to become fluid, or gas.

ACTION OF THE DYNAMO.

(See page 155.)

NOW, we will put the dynamo in motion, slowly, to follow the action of changes.

The copper wire around the armature is filled with the tension. This tension is disturbed from the outer tension, and produces vibrations in the tension of the wire. Once the tension in the wire vibrates, the tension outside presses into the wire, the same as a vacuum tube, and the action begins. These vibrations pass through the magnetic coil, and vibrate the tension in the magnet When the tension in the magnet is in vibration, the tension outside, being constant, presses into the magnet poles, and we have a magnetic pull. The greater the quantity of vibrations, or disturbance, the greater the magnetic pull. The armature rotating between the poles, disturbs the tension, or magnetic pull. The dynamo is now at full speed, and the action regular. The tension in the magnet is in a great vibratory condition. The atoms are in stress, and the tension is in a circuit through the poles of the magnet; that is, the tension has found its equilibrium through the magnet. The magnet, at this period,

is like an open tube, the metal offering little resistance to the action of the tension. The pressure on the outside pressing against the surface of the magnet, presses in at one pole and out through the other, forming a circuit. The armature continually making and breaking this circuit, or tension, produces electricity. The magnet is a receptacle for the tension at rest, but when vibrated, it is thrown out of equilibrium. This causes the pressure of the tension to press against the surface of the magnet. The lines inside being in motion, the pressure outside then presses in, and produces the flow, or circuit, or point of rest.

WHAT IS DISEASE AND DECAY IN THE VEGETABLE FAMILY?

WE will illustrate a plant in a healthy and vigorous condition of growth. This plant must have all the natural elements and conditions in soil, air, sunshine and drainage. All these are necessary to keep this plant sweet. The soil must have good drainage to keep it sweet and pure, and a certain amount of heat to keep up a free circulation of sap. This is the vital part of a plant.

As long as these conditions can be maintained, the plant can continue to grow and mature in a healthy condition, but as soon as this is denied this plant, disease sets in; first in the soil. This is the food of the plant, supplying its circulation, which is its life. The soil not having the conditions around it to keep up an active circulation in it, becomes sour, or stagnant. This is imparted to the roots, and up into the sap, or circulation. The roots are incased in this soil, and the plant must absorb its ingredients, or contents, through its circulation. This sourness is imparted to the sap; then comes a struggle between the two conditions of sweetness and

sourness, life and death. One resists the other, and the fight goes on. Now, this plant cannot assist itself; it is compelled to stay in this unfavorable condition, and suffer decay by fermentation—for the sourness has conquered, and taken possession of this plant, and it begins to ferment.

This fermentation is a liberation of the gases, or matter, composing the plant. This action causes heat, and increases the liberation of the gases, allowing them to go free and condense into some other matter. These gases do not rot, or decay, going off into nothing. They are simply liberated by the action of the fermentation.

This is what is termed chemical action. It is the change from sweetness to sourness, or from alkali to acid. These changes are acting on the tension, keeping it in vibration, causing heat. The acid and alkali are battling for place, but cannot find it—for this keeps the tension in agitation, keeping up the commotion, and this allows the gases to dissolve or go free. The alkali is like the cold tension of space—it is sweet and pure, quiet and at rest. The acid disturbs this rest by trying to mix with it, and the alkali resists, and does not want to associate with the acid, but the acid insists, and forces itself into the alkali, and there is a battle between them,

and this liberates the matter that opposes these combatants. All this action is acting on, and disturbing the tension, and the tension disturbs the matter and chemicals. They are all seeking an equilibrium, or a point of rest, but this they cannot find until they become equalized; and as we apply more acid, it increases the heat and disturbance, and the gases seek their own families, and want to consolidate to resist this acid, but the acid forces itself between these gases, separating them.

Now, the acid has conquered, and taken possession of the plant, and liberated all its gases, or matter, but there is nothing lost in this decay, or change, from a solid to gas, the same amount of matter remains eternally. This is the earth's circulation, or interchange of matter, keeping up its life, and as we apply alkali to this chemical compound of sweetness and sourness, it will become sweet again—for the alkali will conquer the acid, and subdue it, and allow the gases to associate with their own families through the tension. These gases find their relatives, and consolidate, combining and uniting to protect themselves, for the alkali assists them.

Now, to cause any action or change, there must be two opposing actions, heat and cold, sweetness and sourness, or alcali and acid. These resist each other, causing heat. The heat vibrates

the tension, liberating the gases, or matter, opposing these actions. All these changes are simply an action disturbing the equilibrium of the tension, causing heat in this disturbed space. This is where the force is exerted, and the atoms, or gases, are acted on.

This will apply to all chemical actions and compounds, and to all vegetable and animal life or matter.